

Technology Backgrounder

Diagnostic X-ray

As a global player, Philips provides a full digital radiography (DR) portfolio. Known as a vendor of premium DR rooms and mobile units, Philips is expanding access to health care for those with limited budgets and a need for clinical excellence. With more than 100 years of radiography experience, including 20 years of DR experience, Philips has established a foundation of innovative DR solutions that meet the needs of patients and health care providers.

Philips PrimaryDiagnost DR

Not available for sale in North America



Primary radiography requirements are the 'must-have' diagnostic functions essential to general radiography examinations. Philips has designed the **PrimaryDiagnost DR** to be the only system necessary for these key tasks. It unites general radiography functionality with ease-of-use and reliability. Users benefit from high cost effectiveness throughout the product lifetime.

The system consists of a tethered portable detector that works with the X-ray table, on the vertical stand, and for free exposures. It is managed by the intuitive Eleva user interface and requires only three clicks to complete an X-ray examination. The geometry can be adapted quickly for sitting, standing and supine patients, in various positions, to support a wide range of DR applications. All components are counter balanced for easy manual movement and can be placed around the patient.

PrimaryDiagnost DR's single detector configuration is an affordable way to extend clinical capacity and offer imaging services based on Philips imaging technology. It has been designed

to streamline the examination process, thus giving staff time to focus on patient care, and outcomes.

Philips DuraDiagnost (Rel. 3)

Not available for sale in North America





The family of DR products is an attractive solution for health care providers with a limited budget but a demand for fast digital workflow. The **DuraDiagnost** comes with a number of high-end Philips benefits, such as customizable room configurations, the Eleva user interface and UNIQUE image processing, for improved economic value.

The Value room configuration offers a cost-effective opportunity to enter the DR workflow. Central to this performance oriented solution is **SkyPlate**, a single, lightweight (2.8kg), cassette-sized, wireless portable detector. SkyPlate can be easily moved between table and vertical stand to accommodate a wide variety of chest, abdominal and extremity examinations. Ease of use and exam versatility makes this solution a sensible choice. By sharing the SkyPlates between compatible Philips DR systems, cost efficiency can be pushed one step further.

With DuraDiagnost, digital radiography rooms can be tailored according to clinician needs, from a fully featured dual-detector room to a versatile single-detector system. DuraDiagnost rooms are floor-mounted digital radiography systems designed to fit in examination rooms with normal ceiling heights. Workflow features, such as a floating tabletop and default Source-to-Image-Distance (SID) positions, simplify examination processes.

"With DuraDiagnost we are able to provide our patients with personalized medical care and at the same time remain within a reasonable budget," said Dr. Kathrin Scharfetter, medical specialist for Diagnostic Radiology and Pediatric Radiology, Radiology Center Eppendorfer Baum, Hamburg, Germany.

From left to right: DuraDiagnost Efficiency room, Value room, Focus room, Chest room, Compact room











Philips MobileDiagnost wDR (Rel. 2)

Not available for sale in North America





Philips **MobileDiagnost wDR** offers the superb quality and full efficiency of Philips' premium digital radiography rooms designed into a flexible and easy-to-maneuver mobile X-ray system. Quick decisions are made possible thanks to rapid image availability via the lightweight **SkyPlate** detectors, Philips cassette-sized wireless portable detectors. By sharing the SkyPlates between compatible Philips DR systems cost efficiency can be pushed one step further. To facilitate the daily workflow, **SkyFlow**, the scatter correction algorithm, provides high chest image contrast without grid handling.

"The MobileDiagnost wDR makes you feel that you're a part of the future of X-ray technology," said Susan Doheny, senior radiographer, Galway Clinic, Galway, Ireland. "Having the ability to send images wirelessly greatly improves efficiency. The radiologist can have the images reported within minutes, and this report can be made available throughout the hospital."

The MobileDiagnost wDR is designed for the aggressive demands of busy medical facilities. Once the system is positioned around the patient, the MobileDiagnost wDR acquires images in just a few seconds and sends them wirelessly to the hospital network. The combination of the MobileDiagnost wDR system's UNIQUE image processing algorithm and intuitive Eleva interface allows technologists to react swiftly and perform a multitude of difficult examinations with ease.

With the easy-to-maneuver MobileDiagnost wDR every area of the hospital can be reached – new levels of imaging flexibility can be achieved.

Philips ProGrade

Not available for sale in North America





Philips new **ProGrade** solution converts analog BuckyDiagnost X-ray rooms to full Philips digital without the hassle and expense of geometry replacement. One day is all it takes. By adding Philips new **SkyPlate** cassette-sized wireless portable detectors and an Eleva workspot, premium digital imaging, enhanced digital productivity and high patient throughput can be achieved. By sharing the SkyPlates between compatible Philips DR systems cost efficiency can be pushed one step further.

Importantly, customers can stay within the trusted Philips family for a truly integrated digital workflow and excellent service support from a single point of contact.

ProGrade transforms an examination room on many levels with powerful advantages:

- Cost effective upgrade of your Bucky equipment to premium Philips digital
- Fully integrated with Eleva for one common platform and smart digital workflow
- High quality digital imaging added to a Bucky system

Philips ProGrade is a big step up in capabilities without a big change in examination room or investment.

Philips DigitalDiagnost (Rel. 4)

Not available for sale in North America





Philips **DigitalDiagnost** is setting the standard in high-end digital radiography, from exceptional performance and flexible rooms to a cutting edge emergency setup. The new release offers **SkyPlate** detectors, Philips extremely lightweight wireless portable detectors, allowing for enhanced economic value when used in trays instead of a fixed detector. By sharing the SkyPlates between compatible Philips DR systems, cost efficiency can be pushed one step further.

DigitalDiagnost allows health care professionals to further customize radiography rooms to match each health center's clinical and financial needs. DigitalDiagnost can be scaled according to individual application requirements, room conditions and budgetary considerations from single to dual, or even triple detector systems. Health care providers can choose from multiple table designs and vertical stands. Overall, the DigitalDiagnost system is ergonomically designed to enhance the examination experience for both patient and provider.

Based on the Eleva concept, the DigitalDiagnost allows for smooth digital workflow and rapid results with excellent UNIQUE image quality to help clinicians make quick decisions in time-critical environments.

"With DigitalDiagnost we obtain high quality images irrespective of the type of detector used, whether fixed or wireless, or whether used internally or positioned outside of the Bucky tray," said Luca Crespi, M.D., chief radiologist, Humanitas Mater Domini, Castellanza VA, Italy.

From left to right: DigitalDiagnost High performance room, Flex room, Value room, Chest room, Emergency room











Juno DRF





The **Juno DRF** digital flat-detector system for both radiography and fluoroscopy examinations allows for increased workflow and patient throughput due to enhanced room utilization, which can positively influence your return on investment.

The system is capable of a wide range of applications, including all common radiographic procedures, gastrointestinal studies, tomography, and vascular studies. Its unique SID of 180 cm (71in.) and table capacity of up to 284 kg (626 lbs), without any restrictions for movement, allows for diverse exam and patient types.

"The flexibility of Juno DRF helps increase patient throughput and efficiency," said Dr. Olivier Vanovermeire, radiologist, AZ Groeninge Hospital, Kortrijk, Belgium. "We consider this a positive return on investment since the single system configuration enables both radiology and fluoroscopy examinations."

SkyPlate - our lightest, most portable detector

Not available for sale in North America



SkyPlate makes performing exams quickly and easy. SkyPlates can be stored directly in the system so you always have them within reach – along with the spare battery. (The MobileDiagnost spare battery is charged in the unit). Use the SkyPlate that matches the exam requirements – either the large 35x43 cm (14x17"), or the small 24x30 cm (approx. 10x12").

The large SkyPlate comes in handy for free exams and OR tables. The smaller-sized SkyPlate is tailor-made for common incubators at the NICU, as well as adult shoulder, skull and extremity views.

SkyPlate's weight – large is only 2.8 kg, small is only 1.6 kg, including Battery – sets an industry standard. Despite its light weight, SkyPlate offers superb image resolution and sensitivity with excellent X-ray dose efficiency. It uses the same premium Cesium Iodide (CsI) detector technology as in Philips flagship DR systems.

Philips SkyPlates are available in two sizes for MobileDiagnost wDR Rel 2, ProGrade, and DigitalDiagnost Rel. 4 systems. DuraDiagnost Rel 3 only offers a large SkyPlate.

SkyFlow – let your work flow with SkyFlow

Not available for sale in North America



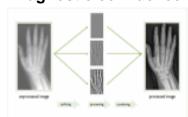


With **SkyFlow**, Philips offers a novel technology that allows clinicians to combine the ease of a grid-less acquisition workflow with the contrast of a grid image for bedside chest radiography. It supports an efficient workflow by providing a consistent grid-like image impression for a wide range of patient types. Without any user interaction or implications on workflow, SkyFlow enhances image contrast as a grid would.

- Fast and smooth grid-less workflow with fully automatic image contrast enhancement
- Excellent image quality with grid-like contrast for all patients types, including bariatric
- Outstanding patient focus with automatic operation, short exam times and comfortable positioning

SkyFlow is available for Philips MobileDiagnost wDR Rel. 2 and DigitalDiagnost Rel. 4 systems.

Diagnostic confidence with UNIQUE



As image processing is of major importance in creating consistent, high-resolution image quality for all anatomical areas, Philips has always placed special emphasis on this area of radiography. At ECR 2014, Philips again demonstrates the excellent image quality Philips UNIQUE image processing software is capable of achieving. Regardless of the digital Philips radiography modality in which the image is acquired, the parameters for all systems and

detectors are the same. The image can be viewed and evaluated from any suitable monitor, providing flexibility and enhancing diagnostic confidence. UNIQUE image processing supports excellent X-ray dose management, as well as workflow efficiencies.

Eleva concept – convenient and efficient



Philips continues to implement the successful Eleva concept across more Philips radiography and fluoroscopy systems, providing a convenient and efficient workflow for dedicated patient care. Designed in close cooperation with technologists, the Eleva

user interface facilitates ease-of-use, because all functions are ergonomically positioned. The monitor workstation is equipped with tools and controls on a single user interface that is intuitive to the user and requires minimal interaction. Automatic parameter settings for each patient and a high degree of customization can expedite workflow. Furthermore, systems can be smoothly integrated into existing environments due to Eleva's state-of-the-art technology and embedded security standards.

Ambient Experience



Philips Ambient Experience is designed to make hospital visits less stressful for the patient. The Ambient Experience complements the Philips DigitalDiagnost and the EasyDiagnost Eleva DRF room solutions. This exciting addition provides a unique opportunity to enhance X-ray rooms, boost clinical investment and establish a competitive advantage. Customers can choose to install the complete Ambient Experience solution or simply select Ambient Cove Lighting.

Dynamic colored lighting, thematic wall projections and audio elements are carefully integrated to engage the senses. This positive distraction may reduce patient anxiety and increase comfort during an exam. Furthermore, in an uncluttered, ergonomically designed work environment, staff can move around more freely to improve workflow.

For more information, additional materials and images, go to www.philips.com/ECR and click on the "News Center" tab.