

The top half of the advertisement features a photograph of a healthcare professional in a white lab coat interacting with an elderly male patient. The patient is wearing a grey t-shirt with a blue grid pattern on the chest, indicating a medical procedure. In the background, a large piece of medical equipment, a Philips CombiDiagnost R90, is visible. The equipment is white and has the Philips logo on it. The overall setting is a clinical or hospital environment with a green wall in the background.

PHILIPS

CombiDiagnost R90

Digital radiography and
fluoroscopy solutions

Experience the **best of both worlds**

Philips CombiDiagnost R90* premium
cross-functional system

Key advantages

- Flexible 2-in-1 system for high room utilization and throughput

- Consistent, superb image quality with dynamic UNIQUE image processing

- Comprehensive dose management technology for patient/staff benefit

CombiDiagnost R90 is a remote controlled fluoroscopy system in combination with high-end digital radiography, designed to improve room utilization in a cost effective manner.

High quality images, a fully digital workflow, dynamic UNIQUE image processing and excellent dose saving features, turn an underutilized fluoroscopy room into an important throughput contributor.

* CombiDiagnost R90 is a work in progress and not available for sale in the USA

Taking a new look **at premium DRF**

CombiDiagnost R90 is a consistent performer for all your DRF studies. Its cutting-edge digital radiography capabilities convert your traditional fluoroscopy room into a high throughput 2-in-1 solution. Supports fast, confident diagnoses with excellent image quality using Grid Controlled Fluoroscopy and Dynamic UNIQUE image processing. Excellent dose management features benefit both patients and staff.

Pediatric low-dose application

CombiDiagnost R90 is designed to take advantage of our DoseWise technologies. If your focus is pediatrics, dose-management features including dedicated pediatric fluoroscopy settings, Grid Controlled Fluoroscopy, and dose regulation, will help manage radiation to your smaller patients.

Operational confidence

CombiDiagnost R90 is easy to operate with flexible geometry and integrated DR technology. The tiltable table (-90° to +90°) is perfect for all standard fluoroscopy studies. A tilting tube column mechanism enables angled projections in any table position. Intuitive touchscreen control speeds exams.

Superb image quality at low X-ray dose

CombiDiagnost R90 smart beam management reduces patient movement blur and blooming effect while at the same time managing X-ray dose through Grid Controlled Fluoroscopy (GCF). Sharply defined X-ray pulses eliminate ramps and trails so there is no soft radiation emitted. With In-Pulse Control, very low pulse frequencies are possible and adapted immediately to the density of the current region of interest.

Intelligent Exposure Technology (IQX) automatically checks and adjusts relevant X-ray parameters dependent on patient density. Exposures are always consistent. When you can precisely manage beam characteristics and reduce actual tube 'on' time, high image quality at low X-ray dose becomes simple, straight forward.

Reveal hidden details

Dynamic UNIQUE image processing software delivers consistently uniform image quality for all anatomic



Advantages of CombiDiagnost R90

regions by automatically adjusting the balance between overexposed and underexposed areas. UNIQUE harmonizes contrast to enhance faint details, helping provide superb quality for both radiography and fluoroscopy studies. UNIQUE noise reduction enhances image quality especially in low dose images.

Work quickly and intuitively

The CombiDiagnost R90 employs our Eleva user interface to provide all the tools and controls necessary for seamless procedures. This one common platform is easy to learn and easy to use, and is highly suitable for streamlining your radiography department. It is the same harmonized user interface found across our radiography portfolio.

Detectors that deliver

SkyPlate wireless portable detectors are extremely lightweight to allow for comfortable positioning. Both large and small SkyPlates can be shared between compatible systems including the latest releases of DigitalDiagnost, MobileDiagnost wDR, DuraDiagnost, and the analog-to-digital upgrade ProGrade, which may lower your cost of ownership.

SkyPlate detectors pair nicely with our SkyFlow intelligent software for non-grid bedside chest exams, when you choose to work without a grid. You'll get high image contrast with less handling and less weight. Retakes caused by grid misalignment are reduced, when you choose to work without a grid.

The versatility of this premium cross-functional system benefits a wide variety of stakeholders:

- **For the radiologist:** Excellent images for fast, confident diagnoses through In-Pulse control and Grid Controlled Fluoroscopy as well as premium DR. Dynamic UNIQUE image processing harmonizes contrast and enhances faint details to provide a consistent image quality.
- **For the technologist:** Easy system handling and exam customization with Eleva user interface for smooth, patient-focused workflow. By using the same components as other DXR modalities a smooth workflow and easy system operation is supported.
- **For the hospital administrator:** Cost effective 2-in-1 system solution for classic fluoroscopy and digital radiography to cover a wide range of applications. SkyPlate detector sharing capabilities for efficiency and may lead to a lower cost of ownership.
- **For the patient:** Comprehensive dose management features benefit patient and the personnel who have day-to-day contact with fluoroscopy procedures.



Table Geometry

Table height	62 cm – 142 cm (24.4" – 59.9")
Table tilt angle	-90°/+90°
Maximum patient weight	284 kg (626 lbs) without limitations
Tube column movement range	160 cm (63")
Source to Image Distance (SID)	113 cm – 183 cm (44" to 72")
Motorized compressor	3 kg – 15 kg compression force

Dynamic Flat Detector

Detector size	43 cm x 43 cm (17" x 17")
Pixel size	148 µm
Image matrix size	2,874 pixel x 2,840 pixel
Acquisition mode continuous fluoroscopy	Up to 30 frames per second
Acquisition mode pulsed fluoroscopy	Up to 20 per second

Generator

Power	65 kW, 80 kW optional
Exposure techniques	• Manual: kV-mAs or kV-mA-s • Automatic Exposure Control (AEC) • Intelligent Exposure (IQX), In-Pulse controlled • Automatic kV reduction techniques
Fluoroscopy techniques	• Pulsed fluoroscopy (PF), in-pulse controlled • Grid-controlled fluoroscopy (GCF), in-pulse controlled
Tube voltage exposure	40 – 150 kV
Tube voltage fluoroscopy	40 – 125 kV

Tube	SRO 33100 ROT380	SRM 0608 ROT GS 505	SRO 33100 ROT380 (for CS)
Focal spot	0.6 / 1.2	0.6/0.8	0.6 / 1.2
Anode heat storage capacity	300 kHU (220 kJ)	800 kHU (593 kJ)	300 kHU (220 kJ)
Maximum voltage	150 kV	125 kV (110 kV in GCF)	150 kV

Digital Vertical Stand

Vertical travel	30 cm – 180 cm (11.8" – 5'11")
Detector	SkyPlate detector
Motorized tilting	Optional, -20° to +90°

Ceiling Suspension CSM

Type	Four-part telescopic column
Ceiling height at SID 110 cm (44")	2.83 m to 3.21 m (8' 8.3" - 10' 5.9")
Collimator	Motorized, automatic

SkyPlate Detector	Small	Large
Type	Digital CsI (Cesium Iodide) flat detector	Digital CsI (Cesium Iodide) flat detector
Detector size	24 cm x 30 cm (app. 10" x 12")	35 cm x 43 cm (14" x 17")
Active area	22.2 cm x 28.4 cm (8.7" x 11.2")	34.48 cm x 42.12 cm (13.6" x 16.6")
Image matrix size	1500 x 1920 pixel	2330 x 2846 pixel

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