Find out how these ground breaking innovations become unique benefits in your daily clinical CT practice.

In the event that upgrades require FDA approval, Siemens cannot predict whether or when the FDA will issue its approval. Therefore, if regulatory clearance is obtained and is applicable to this package, it will be made available according to the terms of this offer.

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. SomeAll of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features which do not always have to be present in individual cases.

Siemens reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

Global Business Unit
Siemens AG
Medical Solutions
Computed Tomography &
Radiation Oncology
Siemensstr. 1
DE-91301 Forchheim
Germany
Phone: +49 9191 18 0
Fax: +49 9191 18 9998

Global Siemens Headquarters
Siemens AG
Wittelsbacherplatz 2
80333 Muenchen
Germany

Global Siemens Healthcare Headquarters
Siemens AG
Healthcare Sector
Henkestrasse 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
www.siemens.com/healthcare

Legal Manufacturer
Siemens AG
Wittelsbacherplatz 2
DE-80333 Muenchen
Germany

Order No. A91CT-06014-50C1-7600 | Printed in Germany | CC CT WS 06112. | © 06.2011, Siemens AG

www.siemens.com/healthcare

SIEMENS

CT Dual Energy Benefits – SOMATOM Definition Flash

www.siemens.com/somatom-definition-flash

Multiply Your Potential with Dual Energy CT

Generation Flash

Answers for life.

Unique Innovations

Tube power: 30 MHU, 7.3 MHU/min

Focal spot size: Small: 0.7 x 0.7 mm / Large: 0.9 x 1.1 mm

Generator power: 200 kW

3D voxel size: 0.24 mm / 0.33 mm

Bore size: 78 cm

Scan range: 200 cm

Max. table load: Up to 307 kg / 676 lbs

Reconstruction performance:
Up to 50 ips (1 oncology staging exam with 1000 images in up to 20 sec.)

SAFIRE*

Dual Energy Heart Perfused Blood Volume (PBV)

12 FDA-cleared DE applications plus Optimum Contrast, Monoenergetic & Metal-artifact reduction

Adaptive Dose Shield for any spiral CT examination

Pediatric CT protocols

Adaptive ECG-Pulsing including MinDose

Selective Photon Shield

1 kW Scan room heat dissipation

Tube Guard

Siemens Remote Services

FAST Planning

FAST Spine

FAST Cardio Wizard

FAST Scan Assistant

FAST Adjust

CARE Configurator

CARE Contrast III

CARE Profile

CARE Dashboard

*The information about this product is being provided for planning purposes. The product is pending 510(k) review, and is not yet commercially available in the U.S.

The SOMATOM Definition Flash, Siemens' latest high-end scanner, was especially designed to make CT exams much healthier for your patients.

Its core innovation – the revolutionary Flash Spiral – can be summarized in four words: Flash speed. Lowest dose.

Unmatched Dose-neutral Dual Energy

Courtesy of JCC Oncologia por Imagern / Viana do Castelo, Portugal

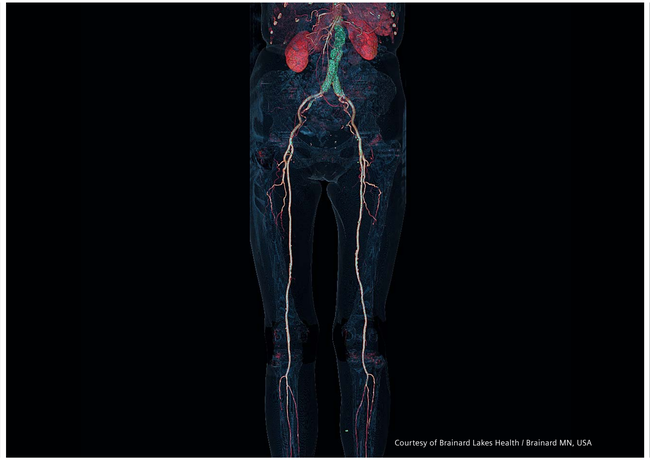
With Siemens' unique Dual Energy (DE), additional information beyond morphology can be obtained without any dose penalty. The Selective Photon Shield assures dose neutrality for single-dose DE by avoiding unnecessary exposure. This makes DE as dose efficient as conventional 120 kV scans, providing all the diagnostic advantages of DE imaging with the same dose as a single energy scan.

"Thus, CT can be performed routinely in Dual Energy mode without additional dose or compromises in image quality."

Schenzle JC et al. Dual energy CT of the chest: how about the dose? Invest Radiol. 2010 Jun;45(6):347-53.

collimation: 64 x 0.6 mm
spatial resolution: 0.33 mm
scan time: 5 s
scan length: 371 mm
rotation time: 0.28 s
100/Sn140 kV,
139/139 effective mAs
eff. dose: 0.84 mSv

Widest Range of Applications for All Clinical Fields



Courtesy of Brainard Lakes Health / Brainard MN, USA

Siemens is the only manufacturer to provide dose neutral Dual Energy (DE) imaging and who applies DE imaging even to the heart, for instance with DE Heart PBV. It offers applications for all possible fields with its 12 FDA cleared applications plus the Mono-energetic imaging, Optimum Contrast and Metal-artifact reduction – all seamlessly included in the *syngo* DE application. More than 130 peer-reviewed articles in leading scientific publications detailing the success and usefulness of dual energy in daily clinical practice have been published.

Dual Energy CT "[…] is able to identify pulmonary perfusion defects with good accuracy. This technique may potentially enhance the diagnostic accuracy in the assessment of PE [pulmonary embolism]."

Thieme SF et al. Dual Energy CT lung perfusion imaging-Correlation with SPECT/CT. Eur J Radiol. 2010 Dec 22. [Epub ahead of print]

collimation: 32 x 0.6 mm
spatial resolution: 0.33 mm
scan time: 45 s
scan length: 1114 mm
rotation time: 0.5 s
100/Sn140 kV, 87/110 effective mAs
DLP: 1001 mGycm
CTDIvol. 8.85 mGy
eff. dose: 5.4 mSv

All Renowned Dose Saving Features

Courtesy of Castlereagh Imaging Westmead / Sydney, Australia

When developing our industry's leading Dual Source Dual Energy solution, we made sure that it is compatible with other dose reducing features such as Iterative Reconstruction, IRIS* and SAFIRE*, CARE Dose4D™, and X-CARE. An amazing variety of additional information at the same dose levels as with an conventional 120 kV scan is possible with Dual Source Dual Energy.

"On both tubes, online dose modulation […] was used."

Graser A et al. Single-phase dual-energy CT allows for characterization of renal masses as benign or malignant. Invest Radiol. 2010 Jul;45(7):399-405.

*In clinical practice, the use of IRIS or SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The information about SAFIRE is being provided for planning purposes. The product is pending 510(k) review, and is not yet commercially available in the U.S.

collimation: 64 x 0.6 mm
spatial resolution: 0.33 mm
scan time: 30 s
scan length: 1220 mm
rotation time: 0.28 s
80/Sn140 kV, 251/122 effective mAs
eff. dose: 5.56 mSv

Saving Interpretation Time and up to 50% Dose

Courtesy of Radiologie LMU Grosshadern / Munich, Germany

All of our 12 DE applications, Monoenergetic imaging and Optimum Contrast not only help save radiation dose but also precious time. For example, *syngo* DE Virtual Unenhanced generates virtual unenhanced images by mathematically removing the iodine content of any object in the image. That eliminates the need for the extra unenhanced scanning while providing excellent non-contrast image quality. Offering this information in one single scan instead of two saves radiation dose, scan time and costs.

"Interpretation of color coded images significantly reduces interpretation time. Omission of a nonenhanced acquisition can reduce radiation exposure by almost 50%."

Graser A et al. Single-phase dual-energy CT allows for characterization of renal masses as benign or malignant. Invest Radiol. 2010 Jul;45(7):399-405.

collimation: 32 x 0.6 mm
spatial resolution: 0.33 mm
scan time: 9 s
scan length: 221 mm
rotation time: 0.5 s
100/140 kV, 200/155 ref.mAs
DLP: 79 mGycm
CTDIvol: 3.33 mGy
eff. dose: 0.06 mSv