

ECR 2016 in Vienna: Hall X5, Booth 12

## Siemens presents new Dual Source computer tomograph Somatom Drive

- **Siemens enables more users and patients to benefit from Dual Source technology with Somatom Drive**
- **Precise diagnostics in all areas of radiology – from pediatrics to cardiology, oncology, and emergency medicine**
- **New tin filter and scans at particularly low voltages reduce the X-ray dose and amount of contrast media required**
- **Innovative user interface and efficient workflows reduce the examination time, preparation, and follow-up care**

Siemens Healthcare, the only manufacturer to produce computer tomographs with two X-ray tubes and detectors, is strengthening its Dual Source portfolio and will present its latest model at the European Congress of Radiology (ECR) in Vienna: Somatom Drive. Thanks to diverse innovative technologies, Somatom Drive is suitable for all clinical fields. Patients benefit from precise diagnostics, examinations with especially low X-ray and contrast media doses, as well as imaging without breath-hold. Users benefit from the intuitive operability of the new touch panels and the fast examination procedures which supports them in meeting the growing demand for scans in the future.

“With Somatom Drive, we are offering a high-performance CT scanner allowing significantly more users to give their patients the advantages of Dual Source technology: remarkable precise imaging and very low dose values,” says André Hartung, Head of Siemens Computed Tomography.

This is achieved through a range of innovative technologies: Somatom Drive’s new Straton MX Sigma X-ray tubes and Sigma generators precisely deflect the X-ray

beam, allowing for more targeted beam focusing and enabling examinations to be performed with very high energy levels at low voltages. With these lower voltages, contrast media – often a major challenge for seriously ill patients and patients with reduced kidney function such as diabetics – can be lowered accordingly. Users can freely set the X-ray tube voltages in 10 kV steps between 70 kV and 140 kV. This means that the voltage and, therefore, the right dose can be selected for each individual patient. Scanning patients at a lower kV reduces their exposure to radiation. This is of benefit, for example, in pediatric cases as well as for patients with tumors who need to be scanned frequently to monitor disease progress. Even for heavier patients, the highly adjustable kV values allow for extremely precise imaging.

### **Optimized X-ray spectrum**

In this Dual Source computer tomograph, Siemens Healthcare combines a high temporal resolution of 75 milliseconds and a scan speed of up to 45.8 centimeters per second with special spectral tin filters. The filters, known as Selective Photon Shields II, optimize the X-ray spectrum by filtering out the parts of the X-ray beam that are rarely useful for imaging. Lung scans can be performed at an extremely low dose, which is likely to prove particularly beneficial for standard screening tests – for heavy smokers who potentially have lung cancer, for example. The spectral filters also now facilitate low doses for calcium scoring in cardiac diagnostics. This combination of low doses and high diagnostic reliability makes Somatom Drive ideal for future applications such as spinal diagnostics and orthopedic examinations. In addition, the Dual Energy mode of the Dual Source scanner can accurately differentiate between different materials in the body – tissue, bones, implants – and avoid metal artifacts.

The field of pediatrics offers a clear example of how the scanning speed of the new system can help patients: Whether in the case of a thoracic scan on a newborn with suspected vascular malformations or the subsequent post-operative follow-up examinations. In such critical cases, breath-hold is often not possible for young patients because they cannot understand the breathing instructions, or they may be on a respirator. Furthermore, frightened or agitated children might not keep still during an examination. The speed of the Dual Source scanner enables scanning of pediatrics without sedation whilst still avoiding motion artifacts. Moreover, the dose must be kept as low as possible when performing X-rays on children. Somatom

Drive with the Stellar Infinity detector and integrated iterative reconstruction and the use of very low kVs supports the most precise low doses for paediatric cases.

### **Advantages for patients and users**

For elderly patients admitted to hospital with undiagnosed chest pain or smokers with breathing difficulties, too, it is a considerable relief to be able to breathe freely during the CT scan. Thanks to the scanning speed of Somatom Drive, movement of the heart and lungs do not compromise the diagnostic image quality. Beta-blockers to slow down the heartbeat are no longer required, since a cardiac scan can be performed in one heartbeat.

These benefits to the patients also lead to smoother workflows in radiology: If the clinical images from the first CT scan are of diagnostic quality, there is no need to perform multiple scans. For most patients with reduced kidney function, the lower contrast media dose eliminates the need for the corresponding preparation and follow-up. Without sedation, there is also no longer a need for anesthetic support and intensive medical care.

Somatom Drive's new touch panel user interfaces allow for intuitive system control and can therefore be operated by users with less experience; less training is required for medical staff, and potential repeat examinations caused by incorrect operation are minimized. In addition, the positioning of the control panels allow medical personnel to be closer to the patient – as in interventional procedures. The touch displays are easy to clean, which improves hygiene during the procedures.

Somatom Drive has already received the CE label. Delivery will begin in the third quarter of 2016.

The products/features (here mentioned) are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Further details are available from the local Siemens organizations.

This press release and press pictures are available at

[www.siemens.com/press/PR2016030187HCEN](http://www.siemens.com/press/PR2016030187HCEN).

For further information on ECR, please see [www.siemens.com/press/ecr2016](http://www.siemens.com/press/ecr2016).

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