

# SIEMENS DUAL SOURCE CT

AT IMAGING SPECIALISTS ROUSE HILL

**SOMATOM Drive**  
**ONE-OF-A KIND**  
**CT TECHNOLOGY**

**Drive**  
**precision**  
**for all**



**SIEMENS**  
**Healthineers**

## One-of-a kind CT Technology

The Dual Source technology is one-of-a kind and has revolutionized clinical capabilities in many ways by using two X-ray sources and two detectors at the same time.

Thanks to unrivaled power, speed, and precision, Dual Source CT allows you to obtain high-quality results even in challenging and advanced imaging applications.



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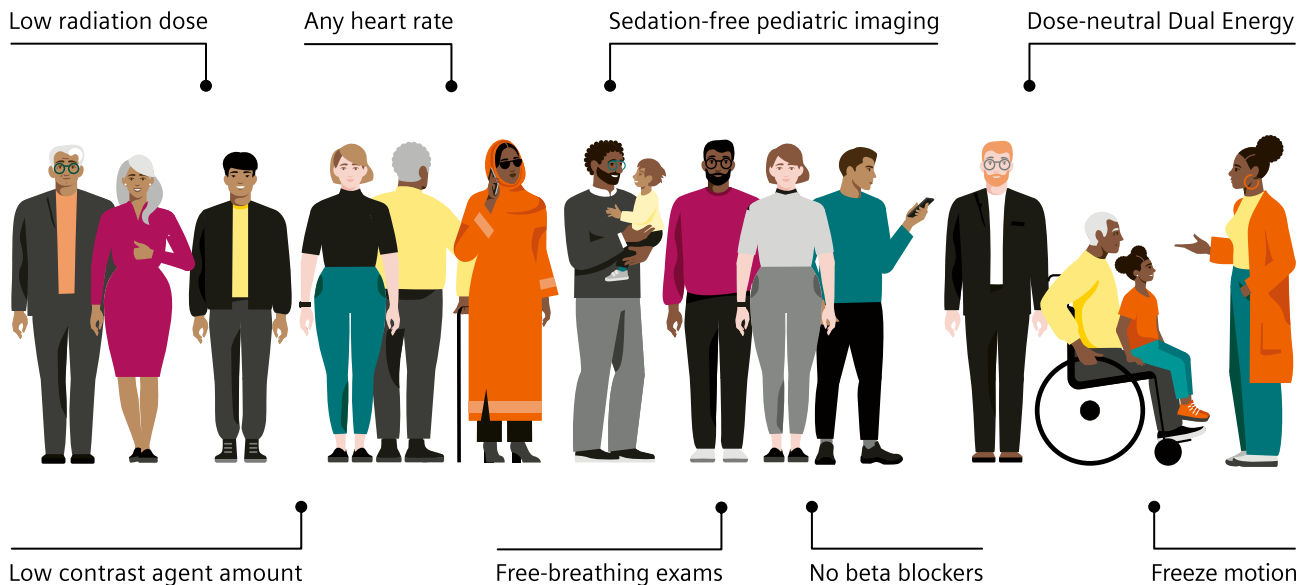
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# Wouldn't it be great to offer each patient ideal imaging?

## Our solution: Dual Source CT

Dual Source CT lets you easily handle any patient and their individual situation: Scan patients at ultra-low dose levels without breath-hold or sedation and at virtually any heart rate – without additional preparation methods.



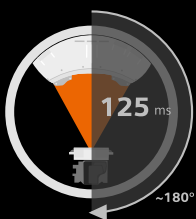
## How Dual Source CT works

Having two X-ray sources, SOMATOM Drive with Dual Source technology is twice as fast as a conventional single source CT scanner.

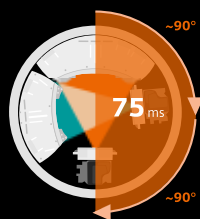


### Did you know that the starting point of Dual Source CT was cardiac CT?

Our aim was to freeze fast-moving structures like a heart – with a scan that can be performed at any heart rate without requiring beta blockers. But with Dual Source CT we achieved more than just freezing motion in cardiac imaging. It has become the ideal imaging technology for many routine and advanced clinical cases.



Single source CT



Dual Source CT

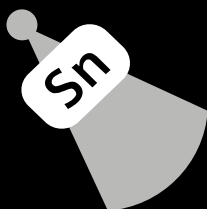
### Get twice the speed

While a conventional single source CT scanner needs to rotate at least 180° to acquire an image, SOMATOM Drive needs to travel ~90° – because it uses two X-ray sources and two detectors simultaneously. As a result, SOMATOM Drive offers faster temporal resolution compared to conventional single source CT. In fact: it is twice as fast.



### Opt for free-breathing exams

Our Turbo Flash scan mode combines high temporal resolution with fast table movement. This allows you to acquire clear images at ultra-high speed of up to 458 mm/s without motion or breathing artifacts – whether you are scanning small, moving children or emergency patients.



### Make no compromise in dose

Combining Dual Source CT with our Tin Filter technology, SOMATOM Drive offers high spatial resolution at extremely low dose levels. This allows, for example, to acquire a non-contrast thorax CT at conventional X-ray dose levels – making SOMATOM Drive ideal for lung screenings.



### Acquire quantitative information with spectral imaging

By using the two tubes to acquire low and high energy data sets at the same time, Dual Source Dual Energy adds tissue and material information to morphology. This diagnostic tool potentially reduces the need for follow-up imaging and can be performed at complete dose-neutrality.

## Drive precision for your patients

SOMATOM Drive provides reliable diagnostic results across all clinical disciplines and helps you achieve a new quality of patient care.

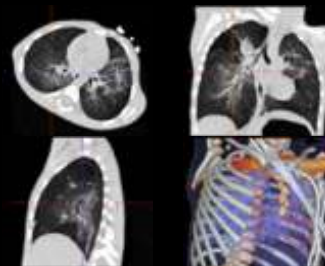
### Pediatrics



Consistent image quality without motion artifacts using high-speed scanning with up to 458 mm/s.<sup>1)</sup>

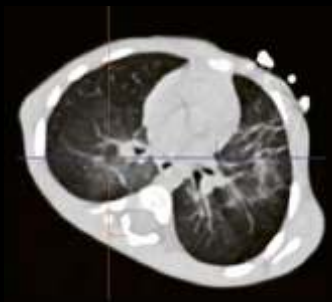


High power at 70 or 80 kV enables ultra-low-dose scanning.<sup>2)</sup>

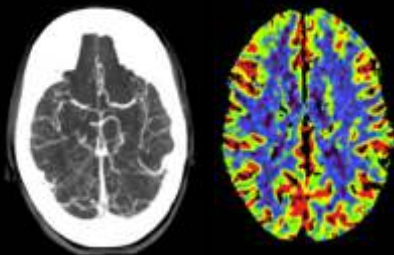


Scan moving patients free-breathing and without sedation to reduce examination time and stress.<sup>2)</sup>

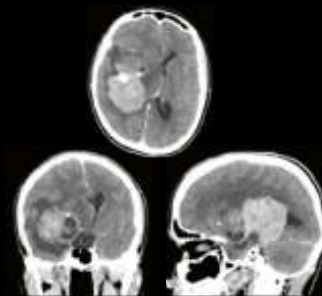
### Acute Care



Long scan ranges without compromising in dose or image quality thanks to powerful tubes and ADMIRE.<sup>2)</sup>



Low-dose, whole-brain, and whole-organ coverage for perfusion imaging with Adaptive 4D Spiral.<sup>4)</sup>



Low-dose brain imaging with high grey-white contrast and clear brain-skull interface.<sup>3)</sup>

### Critical Care



Low-kV imaging enables potential reduction in contrast media for renally impaired patients.<sup>1)</sup>



High image quality even in larger patients thanks to high power reserves and good low-signal performance of the Stellar<sup>Infinity</sup> detectors.<sup>3)</sup>



Dual Source Dual Energy adds functional information without adding dose to speed up confident decision making.<sup>3)</sup>



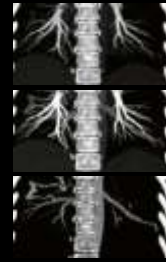
## Lung Imaging



High-pitch thorax scans in less than one second for patients with shortness of breath.<sup>3)</sup>



Spectrally shaped scans with Tin Filter for low-dose lung imaging without apical artifacts, e.g., streaking, even in larger patients.<sup>3)</sup>



Robust, low-dose 4D vascular studies with high temporal sampling at low dose.<sup>6)</sup>

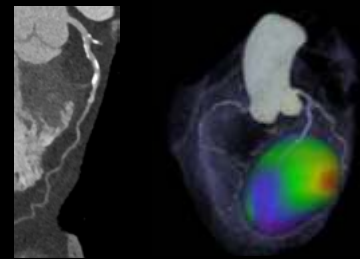
## Cardiovascular Imaging



High temporal resolution of 75 ms makes scanning of patients with high and irregular heart rates possible – without beta blockers.<sup>2)</sup>

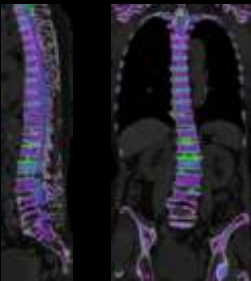


Crystal clear images – even in scans which extend beyond 16 cm.<sup>5)</sup>



Dynamic myocardial stress perfusion adds functional information by using high temporal resolution to cover a broad range of heart rates.<sup>7)</sup>

## Orthopedics



Clinical-routine bone marrow imaging with Dual Energy, enabled by wide spectral separation and dose-neutral Dual Source Dual Energy.<sup>5)</sup>



Scans with Tin Filter reduce extremity CT dose to X-ray levels.<sup>2)</sup>



Accurate and non-invasive diagnosis of gout with Dual Source Dual Energy.<sup>8)</sup>