

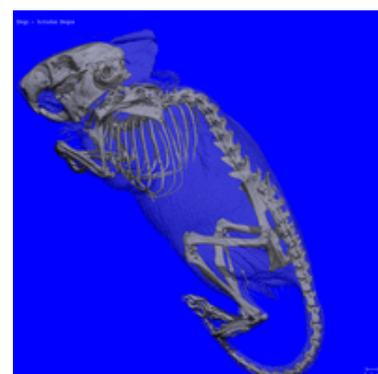
VivaCT 80 - Small animal preclinical microtomography scanner with large field of view

The vivaCT 80 is the in-vivo microCT scanner that offers the largest field-of-view (80 mm) and the best resolution (5 μm) in its category and is hence the most versatile scanner for the in-vivo X-ray micro computed-tomography imaging of mice, rats, and extremities of larger animals up to small rabbits.

The vivaCT 80 benefits from a narrow cone beam angle geometry and a mechanically adjustable field-of-view for best image quality at low radiation dose. Fast scan speed at intermediate and lower resolutions is supported by the new scanner mechanics.

The new integrated monitoring and gating system allows flawless animal handling and high throughput. Interchangeable units give the possibility of monitoring multiple animals simultaneously: while scanning a subject, the next one can be sedated and its temperature and heart rate can be monitored and recorded. The animal is then loaded into the scanner with its dedicated monitoring unit, thus making the whole preparation process more efficient. Observation camera, heating, ambient temperature monitoring, and respiratory gating are also integrated in the system and are controlled from a touch display.

vivaCT 80 in-vivo preclinical microCT scanner

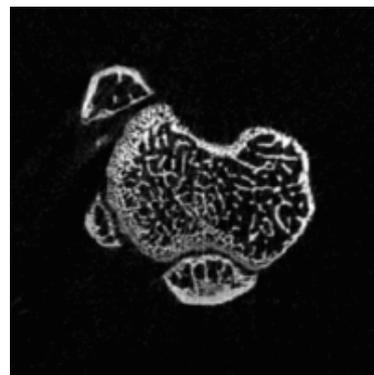


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Specifications	<p>vivaCT 80</p> <p>Cone-beam <i>in vivo</i> microCT</p> <p>Fully shielded</p> <ul style="list-style-type: none"> • No external shielding required <p>Integrated Heating Chamber</p> <p>Integrated Animal Monitoring Unit</p> <ul style="list-style-type: none"> • Temperature Monitoring • Integrated Observation Camera • Heart Rate Monitoring <p>Interchangeable Monitoring Units</p> <p>Integrated Respiratory Gating Unit</p> <p>Integrated Touch Display</p>
Type	<p>Sealed</p> <p>Air-cooled</p> <p>Maintenance-free</p> <p>30 - 70 kVp</p>
X-ray source	<p>3072 x 400 elements (~100% fill factor),</p> <p>48 μm pitch</p>
Detector	<p>< 14 μm (10% MTF)</p> <p>5 - 160 μm nominal isotropic (pixel size)</p>
Resolution	<p>512 x 512 to 8192 x 8192 pix</p>
Image matrix	<p>80 x 145 mm (\varnothingxL) in one scan</p> <p>Up to ~450 mm length with multiple scans</p>
Max. scan size	<p>90 x 500 mm (\varnothingxL)</p>
Max. specimen size	

Min. scan time	20 s
Electrical	100 - 230 V / 50 - 60 Hz 400 W
Dimensions	1750 x 1230 x 910 mm (HxWxD)
Weight	400 kg (standard hood) 430 kg (larger hood configuration)

Maximum length cannot be imaged completely



Mouse Tibia

Options

Larger hood configuration With this configuration, extremities of larger laboratory animals, such as small rabbits, can be scanned.

Filter changer Adding a filter changer allows for shaping the energy spectrum of the X-ray beam. For small and light specimens, using a weak filter enhances the contrast produced by soft materials. Stronger filters improve density readings by reducing the effects of beam-hardening.

Filter materials are 0.1 mm Aluminium, 0.5 mm Aluminium or 0.1 mm Copper. A fourth filter changer position allows scanning without a filter.

[More example images...](#)

[Compression/Tension Device](#)

[Cooling/Heating Device](#)

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