NHD Preclinical Scanner

The Notting Hill Devices (NHD) Preclinical Scanner is a four-dimensional CT scanner designed for measuring respiratory function and health with exceptionally high levels of sensitivity.

HARDWARE + SOFTWARE = A POWERFUL COMBINATION

This is world-class Australian hardware custom-built to run with pioneering 4Dx lung imaging software. It's a powerful technological combination developed by researchers for research.

It allows researchers to conduct investigations previously unimaginable (or unaffordable) in the lab – and ultimately to radically improve the lives of people with lung disease.

OVERCOMING TRADITIONAL SCIENTIFIC HURDLES

The NHD Preclinical Scanner is a specialist tool designed to offer extremely high-resolution and high-sensitivity scanning. And although it's designed for a single experimental subject – mice – it's adaptable. Researchers can use it as an X-ray device, a 3D CT scanner and a 4D CT scanner – and for a multitude of studies and experiments. And none of the specialised lung imaging requires the use of contrast agents.

A DECADE OF RESEARCH BUILT IN

This is technology 10 years in the making, beginning with work at synchrotrons around the world, moving to lab research at Monash University and culminating in development at NHD.

Countless hours of research, testing and refining have gone into both the device and its software, resulting in technology of the highest possible quality.

SIMPLE SET-UP – EASY USE

The scanner is as practical as it is technologically advanced. We've designed it with speed of experimental processes in mind; it's easy to set up, easy to operate and easy to upload your results. Accredited training is provided as part of your purchase, which includes operation and safety, as well as access to support and maintenance.

There are simple, automated, operational modes, as well as a fully manual mode.

Out of the machine, raw data is sent to the 4Dx cloud where it's analysed and returned to you as useable results via a web portal. We guarantee the security of your data.

NO NEED FOR ADDITIONAL EQUIPMENT

This is an all-in-one device for lung-imaging. When you purchase the Preclinical scanner, you receive the sample holder, as well as NHD's pioneering AccuVent ventilator at no additional cost. That means there's no need for additional, expensive hardware.

Preclinical scanner unit

Preclinical Scanner

KEY FEATURES

High-powered micro-focus X-ray source (800 W, 70 μm spot)
Contained within an interlock-protected, radiation-shielded enclosure
High-sensitivity Varian CsI flat panel detector
Four-axis stage system for sample positioning
Adjustable magnification
Integrated NHD AccuVent pressure-controlled ventilator
Designed specifically for imaging mouse lungs – mouse holders included
Integrated control software: • CT, 4D CT and full manual modes • Stage control • Ventilator control • Data management
Seamless integration with 4Dx functional lung analysis (cloud-based service)

Analyses available:
    Structural
• CT
• 4D CT
• Contrast-free vessel segmentation
    Dynamic/Functional
• Regional lung motion
• Regional ventilation
• Regional airway flow, time constants

Detailed metadata recorded, including video

OPTIONS

Bulk analysis packages
Customised data reports
Premium maintenance, service and upgrade plan
Payment and leasing plans