



Animal Conscious Technology™

Technology Designed with the
Veterinary Patient in Mind.

ACT-Audition™ V-Block Bed

Allows for optimal patient positioning
for superior spinal cord imaging.

Act-Theatron™ Integrated RF Shielding
eliminates the need for expensive
room shielding.

ACT-One™ Standard Imaging Package
provides a platform to perform the most
widely used imaging protocols for the finest
quality clinical MRI.

ACT-Two™ Advanced Imaging Package
provides a platform to perform more
advanced imaging protocols for enhanced
clinical MRI.

The Topaz Entrée™ veterinary MRI system utilizes an actively shielded 1.0T superconducting magnet design providing unparalleled signal-to-noise and field homogeneity. The 450mm homogeneous field of view allows for exceptional coverage of the spinal cord while our patented ACT-Theatron™ integrated RF shielding eliminates the need for expensive room shielding. Additionally, our ACT-Audition™ V-Block bed allows for the patient to be positioned within the magnet on their backs during scanning providing optimal animal orientation for spinal cord imaging, particularly if traction is required. Our user-friendly Windows® based Scan Control Software includes optimized protocols for each anatomical site, and allows maximum flexibility in customizing clinical protocols and post image processing. The wide range of 2D and 3D sequences and imaging techniques, including over-sampling, fast imaging, fat and water suppression and high resolution imaging (up to 512 x 512 matrix), guarantee superior image quality. The Topaz Access™ is 100% digital, network ready and DICOM® 3.0 compatible for remote reading and easy image archiving.



Pioneers in Animal-Conscious Technology™

New Windsor, New York - 877-4-AVTMRI (877-428-8674) - www.avtmri.com

Magnet:

Field Strength: 1.0T
Design: Superconducting Actively Shielded
Clear Bore: 900mm
Homogeneity: ± 5 ppm (450mm dsv)
Passive Shimming
Stray Field (5 Gauss): 3.4m axial, 2.4m radial (from magnet isocenter)

Gradient:

Slew Rate: 30mT/m/ms
Linearity: Better than 5%
Residual Eddy Currents: <1%
Actively Shielded & Water Cooled
Room Temperature Shims (2nd order)
Internal Diameter: 640 (± 1)mm

Console & Electronics:

Digital Receiver Sampling Rate: 40M/s (14 bits)
Digital Gradient Control: 16 bits with Digital Pre-Emphasis
Digital Transmitter Control: 16 bits (arbitrary waveforms)
Imaging matrices: 32 X 32 to 512 X 512
Max/Min Field-of-View: 450mm/90mm
Reconstruction Time: < 0.1s (256x256 matrix)
Solid-State RF Power Amplifier
High Power Gradient Amplifiers
Center Frequency: 42.7MHz ± 0.25 MHz
All Electronics Integrated in One Cabinet

Computer system:

Advanced Pentium CPU Running Windows®XP
Memory (RAM) / Hard Disk: 1G / 120G
Ethernet: Standard TC/IP (network ready)
Monitor: 21" TFT
CD-ROM

Table:

Design: ACT-Audition™ V-Block
Maximum Load: 200Kg
Laser Guidance (optional)

Scan Control Software:

Pilot Scanning for Precise Image Slice Position
Setup and Save Scan Parameters and New Protocols
Auto Adjustment of Resonance Frequency and Receiver & Transmitter Gains
Real-Time Scan Process Monitoring

Processing/Display Software:

Display Matrix: 1024x1280
Multi-Window Display
Display Window & Leveling
Image Zoom, Rotate, Annotation & Angle Measurement
Region of Interest (ROI) Drawing
Enhanced Image Filtering
Background Noise Reduction
Image Parameter Display
DICOM® 3.0 Interface
MIP & MPR of 3D images

RF Coils:

The combination of low noise pre-amplifiers together with ACT™ design yields improved signal-to-noise performance while decreasing the RF power requirements for all transmit/receive coils.

Standard Coil Set Includes:

Head, Body and Spine Coils

Small Animal Coil Set (optional) Includes:

Standard Coil Set Plus

Small Head, Body and Spine Coils

Large Animal Coil Set (optional) Includes:

Standard Coil Set Plus

Large Head, Body and Spine Coils

Specialty Coils Available Upon Request

ACT-One™ Standard Imaging Package:

The ACT-One™ Standard Imaging Package provides a platform to perform the most widely used imaging protocols for the finest quality clinical MRI.

Spin Echo: Scout, T1-Weighted, Proton Density-Weighted

Fast Spin-Echo: T2-Weighted, Proton Density-Weighted

Gradient-Echo: Scout, 2D Rephase, 2D Dephase, 2D Fast

Rephase, 2D Fast Dephase

FLAIR & STIR

Fat Suppression

Water Suppression

Movement & Flow Compensation

Multi-Slice / Multi-Angle Imaging

Multi-Slice / multi-Echo Imaging

Variable Imaging Plane Pre-Saturation

ACT-Two™ Advanced Imaging Package (optional):

The ACT-Two™ Advanced Imaging Package provides a platform to perform more advanced imaging protocols for enhanced clinical MRI.

3D Spin Echo & Fast Spin Echo

3D Fast Rephase & Dephase Gradient Echo

2D & 3D TOF & PC MR Angiography

3D MIP & MPR

Steady-State Fast Spin Echo (SSFSE)

Magnetization Transfer Contrast (MTC)

Diffusion-Weighted Imaging (DWI)

Site Requirements:

Minimum Space Requirements: 49m² (527ft²)

Minimum Ceiling Height: 2.45m (8ft)

Gross System Weight: 6000kg

RF Shielding: ACT-Theatron™ integrated

Temperature: 20-26 °C (± 3 °C / hr)

Maximum Power Requirements: 5kW

Voltage: 100/110/200/220/230/240 V

Frequency: 50/60 Hz

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