

ARTOSCAN^M

The Solution for In-Office MRI

Benefits

Easy to Use

- Simple, reliable operation
- Pre-set imaging protocols
- Effortless patient positioning

Easy Site Installation

- No special shielding, power sources, or A/C required
- Low 2,800 lb weight

High-Quality Imaging

- Complete range of imaging sequences
- Anatomy-specific RF coils, including optional phased array coils
- 30–45 minute patient exams

Completely Non-Claustrophobic

- Close patient-operator contact
- Ultra-quiet
- Scans knee, ankle, foot, elbow, wrist, hand

Solid Investment

- 1 patient-per-day break-even
- Increase practice services
- Completely upgradable

Description

ARTOSCAN is the world's leading dedicated-extremity MR imager. Hundreds of prominent orthopedic and radiologist groups worldwide use ARTOSCAN to provide convenient, low-cost MR scans to a wide patient population.

ARTOSCAN-M's modular design permits placement in office and mobile environments. ARTOSCAN-M can be installed in less than 100 ft² and requires no shielding or special power supply. This facilitates placement in environments off-limits to whole-body imagers. Industry-standard DICOM network capabilities permit transmission of images to teleradiology workstations for immediate diagnostic consultation.

Physicians appreciate the superior quality of ARTOSCAN-M's dedicated-extremity imaging, as well as the one patient-per-day break-even. Patients appreciate the convenience of immediate in-office MR exams and the comfortable, claustrophobia-free design. ARTOSCAN-M accommodates 98% of the adult population, including professional athletes.

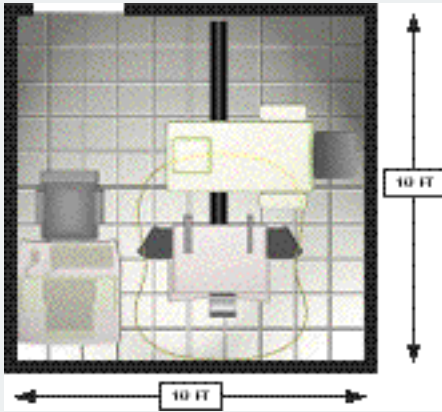
ARTOSCAN-M can provide affordable new MR services to small offices or enhance existing MR services, off-loading routine extremity exams from a whole-body imager to a dedicated-extremity MRI. ARTOSCAN-M is the clear choice for in-office MRI.



Specifications

Site Requirements

- 97 ft² minimum (9'10" x 9'10")
121 ft² recommended (11'6" x 10'6")
- No special power supply, air conditioning, or RF shielding



Magnet System

- Type Permanent (ferrite);
proprietary design
- Field Strength nominal 0.2 T,
transverse field
- Weight 2,116 lbs.
- 5 Gauss Line. 23.6" from the front and
rear of magnet, 11" from
the side
- Dimension Height — 47.2"
Width — 26.7"
Depth — 20.5"

Gradient System

- Strength 10 mT/m maximum
- Rise Time 0.5 msec

RF System

- RF Shield Internal Faraday screen
- Maximum Power . . 150 watts
- RF Coils 3 receive-only
solenoidal coils

Service

- ARAS ARTOSCAN Remote
Assistance System allows
LUNAR Service and
Applications to diagnose
problems via modem

DOCSL84-E-1097

Imaging Specifications

Image Processing

ARTOSCAN uses Pentium Pro 200 MHz CPU with separate control processor and digital signal processor for true multitasking capabilities.

- Interface Workstation console
with mouse and keyboard
- Monitor 17", high-resolution
- Operating System . . UNIX Solaris, Release 2.5
- Main Memory 32 MB
- Hard Drive 2.1 GB
- Archive 650 MB optical drive
- Hardcopy Video and digital output

Image Display

- Reconstruction 2D: <1 second / image
3D: <1 second / plane
MPR: 1.7 seconds / image
- Matrix/Format 2D: 256 x 256
3D: 256 x 256 x 8, up to 256 x 256 x 128, steps of 8

Complete Range of Display Functions

Cine Display for Kinematic Studies

Multi-Planar Reconstruction from a 3D Data Set

3D Volume Backup

Imaging Capabilities (Version 5.0 A)

- Data Acquisition 2-D, 3-D
- Sequences Multiplanar Ortho-Scout Spin Echo short TE (SE)
Spin Echo long TE (SE T2) Multiple Spin Echo (ME)
Gradient Echo (GE) Gradient Echo 3D (GE 3D)
Inversion Recovery (IR) Short T1 Inversion Recovery (STIR)
Turbo Spin Echo (TSE) Turbo Multiple Echo (TME)
Half Spin Echo (HSE) Half Fourier (HFE)
- Performance Sequences Magnetization Transfer Gradient Echo (GE MT)
Magnetization Transfer Gradient Echo 3D (GE MT 3D)
Gradient Echo STIR (GE FS)
Turbo 3D T1 weighted (T3D T1)
Turbo 3D T2 weighted (T3D T2)
- Slice Planes Transverse, Sagittal, Coronal, Oblique, and Compound Oblique
- Min.-Max. TE. 18–120 ms (SE), 12–24 ms (GE)
- Min.-Max TR 50–5000 ms (SE), 40–5000 ms (GE)
- Min.-Max TI. 200–800 ms (IR), 50–200 ms (STIR)
- Slice Thickness 2-D: 2-10 mm thick, 0.5 mm increments
3-D: 0.8-10 mm thick, 0.1 mm increments
- Slice Spacing 0–10 mm, 0.1 mm increments
- Acquisition Matrix 28 x 128 to 256 x 256
- Field of View 100–200 mm, 120 mm displayed
- Flip Angle 10–90°
- Scout View 3 orthogonal planes simultaneously

Options

- Network Package. DICOM-3 compliance via Ethernet thin wire connection (TCP/IP);
remote image transmission through modem and telephone line
- Dual Phase Array Package Three anatomy-specific coils (knee, ankle, and wrist), providing
higher image resolution

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