



The Open Dedicated MRI

Benefits

In-Office MRI™

- Convenient for your patients
- Completely claustrophobia-free
- Immediate diagnostic results
- Increased practice revenues

Easy to Use

- Simple operation
- Pre-set imaging protocols
- Auto-centering RF coils

High Image Quality

- Advanced Dual Phased Array RF coil technology
- Dedicated-extremity magnet design
- 30-40 minute patient exams

Clinical Flexibility

- Extremity imaging including shoulders
- Complete range of imaging sequences
- Accommodates 98% of population

Compact Site Installation

- Fits in a 13' x 18' space
- No special power or A/C required
- Range of RF shielding solutions available

Solid Investment

- Own/operate breakeven of just 1.5 patients per day
- Completely upgradeable
- Backed by LUNAR Service Support

Description

E-SCAN combines the benefits of Open MRI and Dedicated MRI, providing your practice the ability to offer high quality extremity MR imaging in the office. E-SCAN is based on years of experience with the world's leading dedicated MRI system, ARTOSCAN®. E-SCAN offers increased clinical flexibility, including shoulder imaging.

E-SCAN provides a relaxed and comfortable examination. The open magnet design is claustrophobia-free and accommodates larger patients with ease. Simple patient set-up is conducted outside the magnet using self-centering RF coils specifically designed for limbs and joints.

High quality results are easily obtained using a variety of advanced acquisition techniques including Turbo Spin Echo, 3D Gradient Echo and STIR. The operator interface is easy to learn for the first-time user yet fully featured for the experienced technologist.

E-SCAN's compact design and several unique RF shielding solutions allow placement of the entire system in less than 200 ft². The system simply plugs into the wall and requires no special A/C or water cooling. Standard DICOM networking capabilities permit transmission of E-SCAN images to teleradiology workstations for immediate diagnostic consultation.

E-SCAN provides an immediate revenue stream for orthopedic practices, medical centers and imaging centers through a breakeven of just 1.5 patients per day. The high quality imaging capabilities of E-SCAN replaces expensive whole-body MRI systems as the ideal solution for superior musculoskeletal imaging.



LUNAR®

Excellence in Imaging

Specifications

Magnet System

Type:	permanent, open, extremity design
Field:	0.2T, vertical
Dimensions:	62" x 49" x 59" (HxWxD)
Weight:	4,255 lb.
Patient opening:	inner – 24 cm outer – 30 cm
5 gauss field:	51" max. from magnet isocenter

Gradient System

Strength:	20 mT/m
Rise time:	0.8 msec. (0 – 20 mT)
Slew rate:	25 mT/m/ms

Patient Support

Patient weight:	440 lb.
Movement:	manual positioning, hand and wheel locks
RF coil positioning:	auto-centering, 120° rotation
	<ul style="list-style-type: none">• Table rotates to six ergonomic imaging positions. Glides away from magnet 20" for fast patient positioning.• Positioning cushions, head support and non-magnetic step stool included

Computer System

Main computer:	Pentium Pro 200 MMX
Memory (RAM):	32 MByte
Hard disk:	4 Gbyte (20,000-image capacity)
Archiving:	640 Mbyte, 3-1/2" magneto-optical disk (4,500-image capacity)
Operating system:	UNIX Solaris, X Windows
Array processor:	Digital Signal Processors 64 Mbyte, 33 Mflops
Image reconstruction:	<1 sec. per image (typical)

Operator Console

Interface:	mouse and keyboard driven
Monitor:	17" high-resolution, color
Multi-tasking:	fully-scan while archiving, printing, registering patients, etc.
Size:	32" x 33" x 24" (WxDxH)
Hardcopy output:	digital or analog to a wide range of filming cameras
Networking:	DICOM 3.0 functionality standard

RF System and Coils

Power:	600 Watt
Coil recognition:	automatic
Pre-amplifier:	integrated in each coil
Receive coils:	shoulder (linear): 7.1" x 6" knee (Dual Phased Array): 5.6" x 6.2" wrist (Dual Phased Array): 4.7" x 2.8" ankle (Dual Phased Array): 6" x 3.9" hip coil – works in progress

Acquisition Sequences

Scout View:	3 orthogonal planes simultaneously
Spin Echo (SE)	Turbo Spin Echo (TSE)
Half Spin Echo (HSE)	Half Fourier (HFE)
Multiple Spin Echo (ME)	Turbo Multiple Echo (TME)
Gradient Echo (GE)	3D Gradient Echo (GE 3D)
Inversion Recovery (IR)	Short Time IR (STIR)
Gradient Echo STIR (GE FS)	
Magnetization Transfer Gradient Echo (GE MT)	
Magnetization Transfer Gradient Echo 3D (GE MT 3D)	
Turbo 3D T1 & T2 weighted (T3D T1 & T3D T2)	

Imaging Capabilities

Acquisition	2D & 3D
Scan planes:	sagittal, axial, coronal, oblique, compound oblique
Slice thickness:	2D: 2 mm–10 mm, 0.5 mm increments 3D: 0.6 mm–10 mm, 0.1 mm increments
Matrix:	up to 256 x 256
Field of view:	acquisition: 100 mm – 300 mm visualization: 140 mm

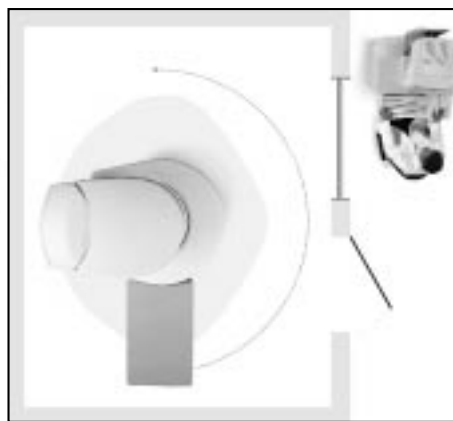
Image Manipulation Tools

- Windowing	- Zoom (rectangular & oval)
- Subtraction	- Rotation/mirror
- Area measurements	- Distance measurements
- Histogram	- Image labeling
- Multiplanar reconstruction from 3D volumes	

Siting

Power requirements:	110 VAC, 60 Hz, 1.3 KVA
Total system weight:	4850 lb.
RF shielding / space requirements:	
- Integrated RF shield:	133 ft ² (works in progress)
- Modular RF screen:	194 ft ²
- Modular RF room:	169 ft ²

Contact LUNAR for complete siting details.



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