

## ASG paramed mri unit



### www.asgsuperconductors.com

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## ASG SUPERCONDUCTORS

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## The ASG Superconductors group of companies has recently undergone re-organization to incorporate all elements of our activity into a single structure.

The aim is to bring together the capabilities within the three units to secure and improve our position as a world-class Italian company, already a worldwide leader in the production of magnets both for scientific research and for the industrial sector and to develop more effectively the magnesium diboride (MgB<sub>2</sub>) wire and MRI businesses.

Competence, knowledge and the ability to work with cutting edge technologies and hi-tech materials remain at the core of our organization. Managers, technicians and all the people who work for ASG Superconductors renew every day their commitment to increase our technological capabilities and productivity, collaborating worldwide with the main scientific research institutes and with the sector's market leaders.

# PARAMED MRI UNIT

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open

Paramed MRI Unit is committed to elevating the standard of care in detection, diagnosis and follow-up, thus improving patient outcomes.

Paramed MRI Unit designs and produces OPEN MRI systems with unique features and benefits, providing outstanding performance and unparalleled patient comfort. <u>Merging design innovation with leading-edge medical</u> technology, Paramed MRI Unit provides advanced

solutions in diagnostic imaging, delivering exceptional value to the global community of Healthcare Providers.

The MROpen EVO is the only superconductive MRI with a "totally open" magnet design, that allows Multiposition imaging including advanced weight-bearing and functional studies, besides providing the highest comfort for patients.

## THE BEST MRI EXPERIENCE

### **MROPEN EVO**

### The "OpenSky" Upright MRI with MgB, superconductive magnet

MROpen EVO provides exceptional patient comfort, delivering a light MRI examination in a relaxing and reassuring environment. You can walk into the scanner and you can sit, lie slightly backward, lie horizontally or even stand. With no barrier between the patient and the surrounding environment, patients can see around them at all times or enjoy watching TV while comfortably seated in the scanner undergoing an MRI procedure. All this simply can't happen in conventional closed MRIs or even in "traditionally open" (C-shaped) systems. Claustrophobic reactions have so far never occurred in any one MROpen clinical site. Patient anxiety appears like a memory of the past.



## OPENING THE HORIZON OF IMAGING

#### **TECHNOLOGY**

Friendly to the environment. Quench-free safe operation. Lower power consumption. No use of natural resources.

#### **MULTI-POSITION IMAGING**

Perform MRI in the position of symptoms: standing, sitting, bending or lying down.

#### **UPRIGHT IMAGING**

Enables Upright MR Imaging of Spine and Joints in Weight Bearing Mode.

#### **BEST MRI PATIENT EXPERIENCE**

U-shaped design delivers unparalleled patient comfort. No barrier between the patient and the environment.

#### HIGHEST PATIENT ACCEPTANCE

Claustrophobic, anxious, larger, elderly or disabled patients, or those who are in pain, are able to undergo the examination easily.

### SPECIAL STUDIES &

RESEARCH

Greatest versatility enables special MRI studies and clinical research: from dynamic studies, to imaging athletes with extreme ranges of flexion of the Spine and Joints. ...it sounds obvious, but it is better to scan the patient in the position of maximum symptoms, where you reveal pathology, than in a position of maximum pain relief...



### MULTI-POSITION IMAGING DON'T GUESS. SEE.



## THE POWER OF GREEN TECHNOLOGY

### **MGB2: THE TRUE HELIUM-FREE INNOVATION**



### **SMART**

Allows revolutionary "open sky" magnet design. Enables innovative clinical solutions in Imaging and Therapy.



### SAFE

Intrinsically "Quench free". No Helium-related hazards and safety systems. Hassle free maintenance.



### GREEN

No Helium used. Friendly to the environment. Lower power consumption. Saving natural resources.



### SIMPLE

Makes revolutionary medical applications possible and easy.



### **ADVANCED**

Optimizes Healthcare by providing:

- innovative clinical solutions
- better patient outcomes
- cost saving across the entire care cycle.



### **RECEIVING COILS**







Channels: 2 Clinical Applications: C-Spine



Channels: 4

Clinical Applications: L-Spine,



MP-LOOP

Channels: 1 **Clinical Applications:** 



SHOULDER

Channels: 2 **Clinical Applications:** 



SPINE FLAT

Channels: 4 **Clinical Applications:** 





Channels: 1 **Clinical Applications:** 



WHOLE SPINE

Channels: 8 Clinical Applications: Spine



WRIST-HAND

Channels: 2 Clinical Applications: Hand,



Channels: 2 Clinical Applications: Knee,



#### FLEX SMALL/LARGE

Channels: 1 **Clinical Applications:** 

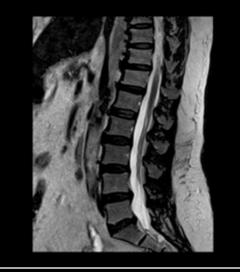
HEAD NECK Channels: 3 Clinical Applications: Brain,



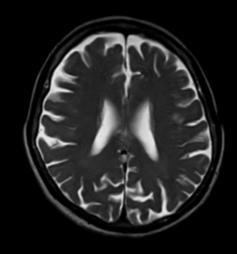


C-spine extension Sag. FSET2

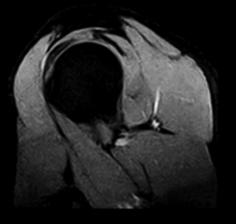
C-spine flexion Sag. FSET2



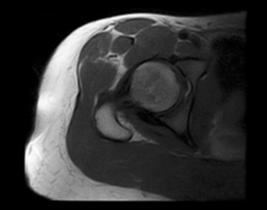
L-spine Sag. FSET2



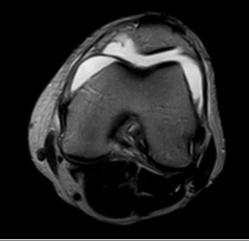
Brain Ax. FSET2



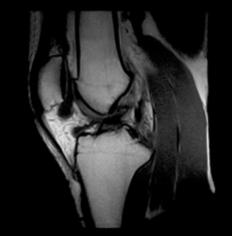
Shoulder Sag. FIR



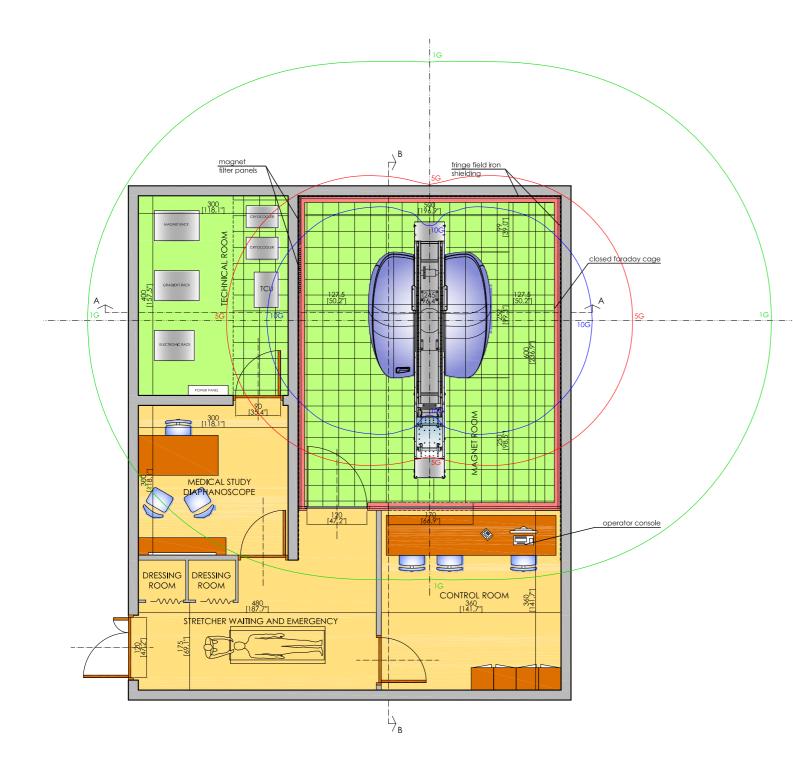
Hip Ax. SET1



Knee Ax. FSET2



Knee Sag. FSET2



### **PULSED SEQUENCES**

Spin Echo	
Gradient Echo (Gradient Echo)(*)	
Multi Echo T2, PD-T2	
Gradient Echo Dual Echo (HiCon) (*)	

### Fast Spin Echo

Fast Spin Echo (FSE T2, FSE T1, FSE PD)(\*) Fast Inversion Recovery (FIR PD, FIR T2)(\*) Fast Spin Echo Fluid Attenuated Inversion Recovery (Fast FLAIR)(\*) Metal T1/T2 HASTE Diffusion Weigthed Imaging (DWI - HASTE)

#### Gradient Echo in Steady State

Balanced Steady State in Free Precession (GBASS 3D, GBASS 2D) Gradient Echo in Steady State (GE 3D) Gradient Echo in Steady State RF Spoiled (GE T1 3D) Time Reversed Gradient Field Echo (EMIT 3D) Dual Echo in Steady State (STSS 3D)

#### MRA

Angio 2D Angio 3D

### **Fat Suppression**

Gradient Echo Fat Water Sepration (FWS)

Short time Inversion Recovery (GE-STIR, SE-STIR

(\*) Flow Compensation available

### **TECHNICAL SPECIFICATION**

Field Strength	0.5 T
Туре	Superconductive "Cryogen-free" based on the technology of MgB2 (Magnesium Diboride)
Lateral Gap	56 cm 22 <sup>3</sup> / <sub>64</sub> in
Digital Spectrometer	I-box spectrometer
Receiving channels	8
Gradients max intensity	20 mT/m
Rise time	0.6 msec (0 - 20 mT/m)
Slew rate	33 mT/m/msec
Receiving coils technology	Multi array cross tuned
Max patient weight	200 kg / 440 lb
Patient position	Laying, sitting, standing
Graphic user interface	MR-GUI Pro

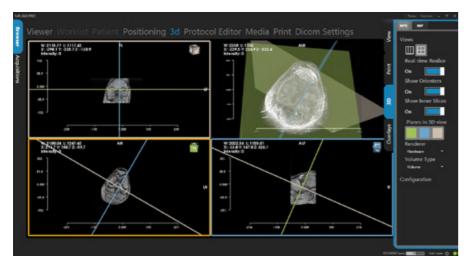
### SITING REQUIREMENTS

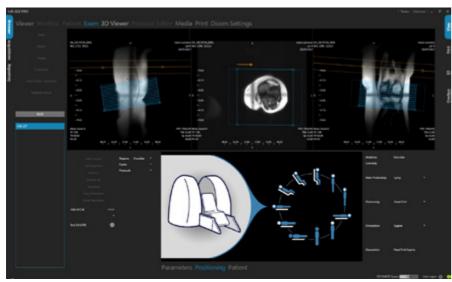
Total System Weight	28,000 kg / 61729 lb
Dimensions	170x200x200 cm (WxDxH) / 66 <sup>5</sup> / <sub>64</sub> x 78 <sup>47</sup> / <sub>64</sub> x 78 <sup>47</sup> / <sub>64</sub> in
Electronic Cabinets	3 x 250 kg / 3 x 551 lb
RF Shielding	Required
Power requirement	400V 3N ~50Hz 480V 3N ~50/60 Hz
Power Consumption	35 KVA



NEC

### **MR-GUI PRO**





All our MR scanners are based on our own software platform, MR-GUI Pro. This aspect means total control of software capabilities and continuous development of new features to answer to our customers' needs.

Thanks to the complete integration between the new IBOX spectrometer, the acquisition software and the post processing management of the acquired images, MR-GUI Pro increases the workflow on the ASG Superconductors MR systems.

The operator interface developed according to the guidelines of the Windows Presentation Foundation (WPF), has been designed to maximize workflow, usability and product reliability. MR-GUI Pro, equipped with complete integration with RIS/PACS, allows, in addition to manual data entry, a quick management in the patient data workflow directly from WL or the local archive. The acquisition sequences and the reconstruction algorithm have been optimized to provide high image quality combined with better spatial resolution.



### **CUSTOMER SERVICE**

We take pride in supporting your team through continual and proactive maintenance. Our experts are here to make sure that your equipment is functioning optimally. We are committed to maintaining your MR scanner and acting quickly to get your system up and running should you experience a problem. Through the remote Diagnosis & Repair approach, we minimize the impact of a failure on your daily routine by reacting quickly when an unexpected event occurs, increasing the equipment stability and reliability. Realtime interaction between clinical staff and clinical application experts, whenever a support need arises, provides immediate and secure access to clinical application expertise and ensures the usage of the clinical application's full potential.

## TECHNOLOGY MAKES IDEAS FEASIBLE

### **MRI FOR RESEARCH**

### Technology makes ideas feasible

ASG Paramed MRI Unit supplies the MROpen scanner to Universities worldwide involved in different research projects. The Alberta Cross Cancer Institute of Edmonton University for MR guided radiotherapy and the Sir Peter Mansfield Imaging Centre of Nottingham University for the study of the lung using hyperpolarized gases are two examples of how the MROpen's capabilities offer new possibilities in MR studies.



As a claustrophobic patient who even needed valium to use an "Open MRI Centre" I can only applaud the Upright MRI scan I have ever had!



...I have been in many scanners in my life and it is not always a pleasant experience... not to be confined into a tight space will have a huge benefit.

## **TESTIMONIAL PATIENTS**

### CONTACTS

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