

## Model 5403 System Installation; Minimum Facility Requirements for True Bipolar Systems and Systems with Field Reversal installed in North America

### Floor Space:

- Magnet Floor Area: 620 x 620mm (24 x 24")
- Floor Capacity: 124kg (275lb)
- Power Supply & Rack Floor Area: 700 x 900mm (28 x 36")
- Floor Capacity: 100kg (220lb)

An area for access to the Magnet and Power Supply must be provided. The total area for the system and comfortable operation is about 3 x 3m (10 x 10ft). The area should be clean and free from obstructions.

### Electrical Service:

	True Bipolar System	System with Field Reversal
<b>MPS Power:</b>		
Power Supply:	2 x Kepco BOP 20A-20V	Elgar Sorenson DLM40-75E
Voltage:	115Vac, Single Phase, 47 – 63Hz	180-264Vac, Single Phase, 47 – 63Hz
Current:	22 Amps	28 Amps
Circuit Breaker:	25 Amps minimum	30 Amps minimum
Power Cable:	3 Conductor, 12AWG Min.	3 Conductor, 12AWG Min.
Mains Outlet:	Nema L5-30R or equivalent	Nema L6-30R or equivalent
Mating Plug:	Nema L5-30P or equivalent	Nema L6-30P or equivalent
<b>Auxiliary Power for Rack:</b>		
Voltage:	115Vac, Single Phase	
Current:	15A	

**Note:** Due to liability and insurance reasons, the mains power installation and connections must be completed by the facility electrician.

### Water Cooling:

- Water Temperature: 15°C to 20°C, non-condensing. Specifications given at 18°C
- Flow Rate: 2 liters (0.5 US GPM) / min
- Pressure: 0.8 bar (12 PSID)
- Water Hose: 6mm I.D. (1/4"), rubber, 2 x 5m long minimum
- Plumbing Fittings: To connect 6mm hose to water source and drain. (It is recommended to have a 50 micron water filter to trap debris on the facility water source and shutoff valves on the water source and drain.)

### System Computer (if required and not provided by GMW):

- Processor: Intel Pentium 4, 2GHz PC or better
- Memory: 256MB RAM
- Free Drive Space: 500MB
- Interface: IEEE-488 (GIPB), National Instruments PCI-GPIB, P/N: 777158-01
- Monitor Resolution: 1024 x 768 or better
- Operating System: Windows XP pro

### Equipment Rack (if required and not provided by GMW):

- Depth: 760mm (30")
- Free Space: 14U high (~24.5")

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## **Lifting Equipment for Installation:**

Forktruck or other lifting device with minimum safe lifting capacity of 150kg

Nylon Slings with minimum safe lifting capacity of 150kg

## **General:**

The Purchaser must provide all equipment and labor for delivering the equipment from the delivery dock to the installation site. You should have a User Manual for the Model 5403 76mm Electromagnet and for the magnet power supply. Please provide these to the person who will be responsible for the System installation. If you do not have the User Manual or need to discuss details of the installation please call GMW. If a GMW Engineer is to supervise the installation any delays caused by inadequate preparation may result in additional charges for Engineering Time.

If you are providing your own equipment rack, it must be a minimum of 760mm (30") deep.

**Note:** The weight of an assembled 5403 magnet system ranges between 300 and 500 lbs, depending on the options installed. While it is possible to rig and move this magnet by hand, use of proper lifting equipment is strongly recommended (either an appropriately rated lift truck or a traveling crane). It is the responsibility of the facility to provide the means to move and lift the magnet for assembly on to its base and move it to its final installed position. If the means to do this is not available in-house, the customer may be required to hire an outside rigging company to lift and move the magnet. Scheduling of the riggers is the responsibility of the customer. Should the installation time be extended due to problems with the rigger scheduling, GMW reserves the right to bill for additional time beyond the original contracted amount.

**Important:** Due to liability and insurance reasons, the mains power installation and connections must be completed by the facility electrician. The GMW engineer will not complete the mains power connection. Please ensure that the facility electrician is available to do this work.

## **Model 5403 System Installation; Check List**

### **Site:**

Floor space and work space cleared and ready for equipment installation.

Appropriate electrical services installed

#### **Materials Required:**

Power Plugs

Power Cable

Facility Electrician ready to make mains connections to power supply at the time of system install

Cooling water supply installed with shut-off valves

#### **Materials Required:**

6mm I.D. (1/4") water hose, 5m for source and 5m for drain

Water hose fittings appropriate for installed plumbing

Water hose clamps

Misc. Items (to be provided by facility):

Tools:

Power Drill with 5/16" socket (to open magnet crates)

3/4" socket wrench (for removal of magnet from shipping crate)

Nylon lifting slings, chains, cables and other rigging equipment suitable for lifting magnet.

All required materials on this list are to be provided by the facility.