SPICER SC24

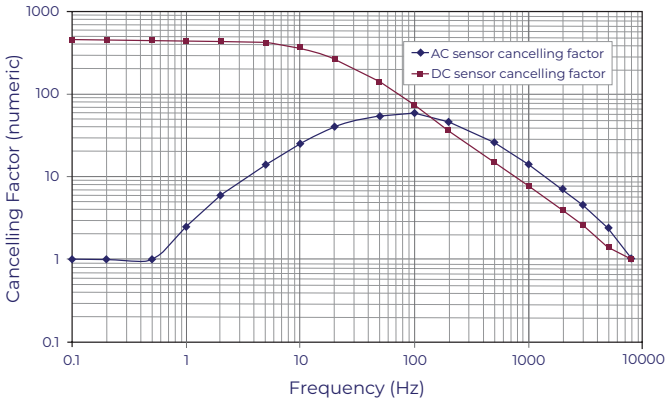
DESCRIPTION

The Spicer SC24 is the premier magnetic field cancellation system with DC/AC sensor. The SC24 offers highly customizable installations to meet your instrument's needs.

KEY FEATURES

- Uses DC + AC sensors to cancel fields from DC to 5k Hz
- Mixes dual sensors to create a virtual sensor "inside" the EM column
- Advanced controller with a touchscreen user interface, automatic setup, DC reset feature, simultaneous display of DC & AC fields, and optional external monitoring
- Quick confirmation that microscope is clear for use with green "Field OK" indication on sensor(s) & controller
- Adapts to field changes within 100 µs

CANCELLING FACTOR



The SC24/DC+AC Sensor cancels fields from DC to 5k Hz, while the SC24/AC Sensor provides excellent cancellation of 60 Hz and its harmonics.

SC24 Controller

SC24/DC+AC Sensor

SC24/AC Sensor

SPECIFICATIONS

Field Cancelling	
Components Cancelled	X, Y, Z fields
Dynamic Range (X & Y)*[1]	4.8 µT Pk-Pk
Dynamic Range (Z)*[1]	3.3µT Pk-Pk
With SC24/DC+AC Sensor	
Ambient DC Field Limit	± 200 µT max
Field Cancelling Factor	> 100 X at 50/60 Hz > 400 X at DC (incremental)
Bandwidth	DC – 5,000 Hz
Cancelling Noise Limit (DC to 5,000Hz)	0.7 nT RMS total
DC Drift*[2]	< 2 nT/ 24 hours
Power	120/240 V 50/60 Hz, 100 VA

1* Dynamic range is stated with standard cancelling cables. Larger range is available for extreme fields with custom cables. Dynamic range is stated at the nominal AC power input of 120 or 240 volts RMS.

2* Drift (@23°C ±2°C, after 2 hour warm-up)

SPICER CONSULTING

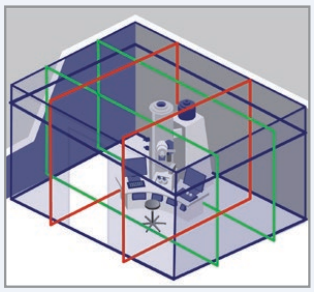
VEC

Mitigation for Precision Instruments

1441 Rollins Road
Burlingame, CA 94010
www.vibeng.com

SPICER SC24

INSTALLATION EXAMPLES

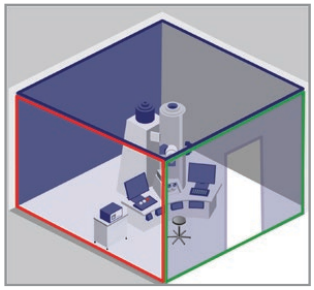


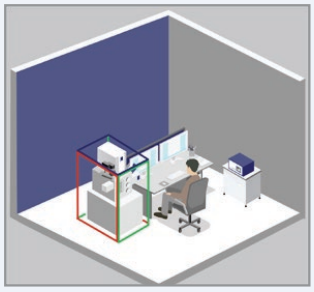
DUAL LOOP INSTALLATION

Ideal For	Transmission Electron Microscopes (TEMs)
Benefit	Uniform cancellation along the entire electron beam column
Performance	Reduce fields from 10 to 12 mG to 0.05 mG from 1.3m – 4.5m

SINGLE LOOP INSTALLATION

Ideal For	Scanning Electron Microscopes (SEMs) and Dual Beams that are in a single room with one microscope centered in the room
Benefit	Cables are on the wall, out of the way, and don't inhibit access and serviceability of the microscope
Performance	Reduce fields from 20 mG to 0.1 mG



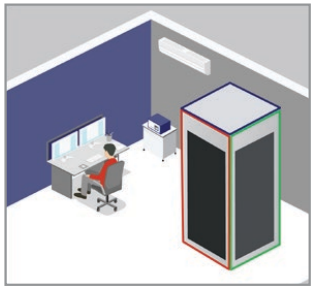


FRAME INSTALLATION

Ideal For	Standard SEMs and Dual Beams with multiple instruments in the same room or when microscope is in a very large room away from walls
Benefit	Helmholtz loop configuration provides excellent performance and field uniformity while minimizing interference on adjacent instruments
Performance	Reduce fields from 20 mG to 0.1 mG

ENCLOSURE INSTALLATION

Ideal For	SEMs, Dual Beams, & TEMs with enclosures
Benefit	Cables integrated into system enclosure, and VEC can provide layouts to accomodate cranes and other accessories
Performance	Reduce fields from 20 mG to 0.1 mG



Hybrid configurations and advanced double dual loop system design also available.

For more information about the Spicer SC24, scan this QR code

SPICER CONSULTING CE Nemko

VEC
Mitigation for Precision Instruments

1441 Rollins Road
Burlingame, CA 94010
www.vibeng.com