



# MRI Monitoring for Oxygen Deficiency

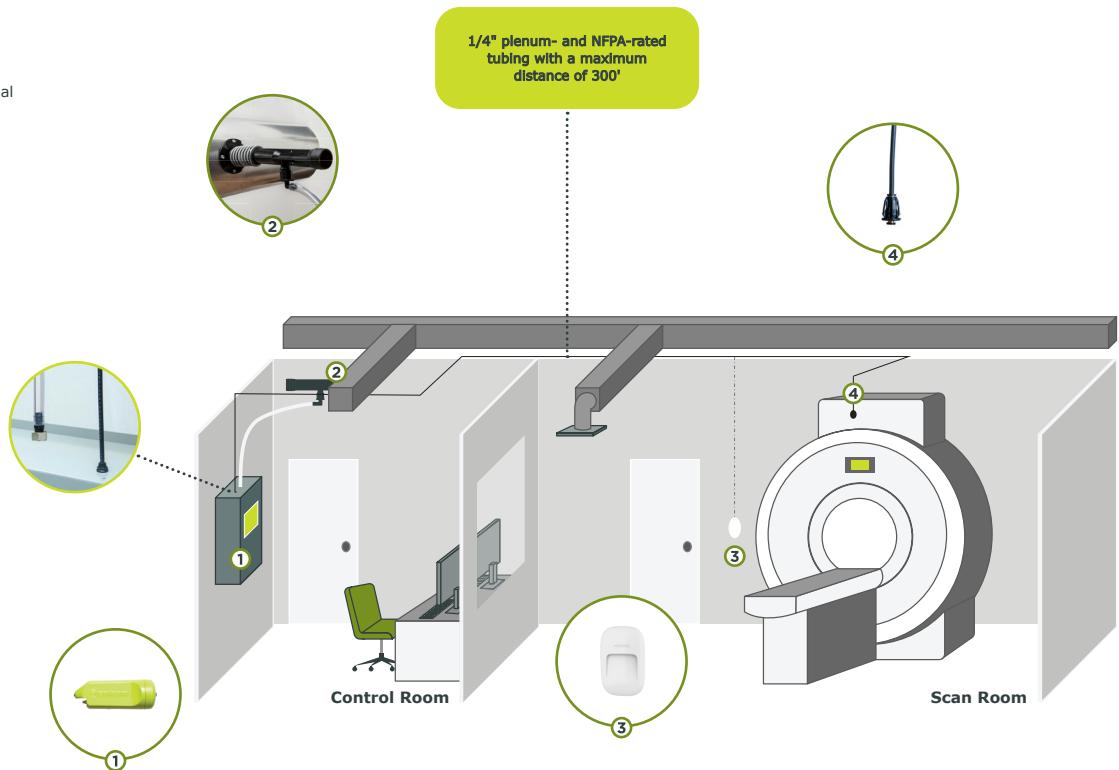


MRI rooms require large amounts of helium to maintain the required magnetic field. In the event of a helium leak, the MRI is at risk of improper operation. Likewise, the indoor environment and any individual in the room is also at risk, as the atmosphere may be deprived of oxygen.

Antrum's centralized sensing platform is the ideal solution for MRI rooms. Using the building's existing HVAC system to draw air samples from the MRI room to the technician's office or maintenance room, AntrumX™ is easier to access, calibrate, and maintain than traditional solutions. Additionally, AntrumEYE's smart analytics dashboard is accessible on a computer or mobile device, delivering critical oxygen levels data anywhere, anytime.

## SAMPLE INSTALLATION

- ① **SENSOR PACK**  
Contains the Oxygen sensor with easy-to-read display.
- ② **AIR ACCELERATOR**  
Uses building differential pressure to create a vacuum.
- ③ **FACEPLATE**  
Air samples are drawn from the faceplate to the control panel.
- ④ **DUCT PROBE**  
Air samples are drawn from the probe to the control panel.





## Benefits of Antrum's Centralized Sensing

### Reliability

AntrumX utilizes the building duct static pressure to generate a vacuum instead of prone-to-fail mechanical pumps. The ability to provide a system with no moving parts makes AntrumX a more reliable solution compared to competitive products.

### Calibration

Competitive products require the use of calibration gases in the field whereas AntrumX allows users to calibrate sensors in less than 1-minute by simply replacing the sensor pack. In addition, AntrumX uses an optical oxygen sensor that can last up to 5 years in clean environments.

### Total Cost of Ownership

With lower initial and continuous costs to maintain, AntrumX provides an owner with a more reliable and cost-effective approach to monitoring their MRI rooms.

Total Cost of Ownership (TCO)									
Parameters			Initial Cost	12th Mo. Calibration	24th Mo. Calibration	36th Mo. Calibration	48th Mo. Replacement	TCO for 4 Years	Antrum Savings
1 MRI Room	O <sub>2</sub>	Competitor(s)	\$8,300	\$125	\$1,000	\$125	\$1,000	\$10,550	24%
		AntrumX	\$6,400	-	\$800	-	\$800	\$8,000	

#### Notes:

- "Initial Cost" and sensor "Replacements" exclude installation costs
- Competitor(s) use an electro-chemical sensor, requiring annual field calibrations
- AntrumX utilizes luminescence-based optical technology, upgraded every 2 years
- AntrumX is replaced with a 1-minute sensor pack replacement

Oxygen Gas Sensor Specifications					
Typical Application	Technology	Range	Resolution	Accuracy	Response
Oxygen Depletion for MRI	Optical	0 - 25%	0.1 mbar	< 2%	< 30s

#### Notes:

- Measures partial pressure of Oxygen (ppO<sub>2</sub>)
- Sensor lifetime > 2 years, up to 5 years in clean environment