AEROFLEX

TECHNICAL BULLETIN

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AEROFLEX® and MRI Quench Piping

Magnetic resonance imaging (MRI) scanning machines are employed in the healthcare field for disease detection, diagnosis, and monitoring of treatment.

Major MRI machine manufacturers, such as GE, Siemens, Canon, Hitachi, and Philips, use cryogens to cool magnets in MR scanners. Cryogenic gases, such as helium, are designed to be safely vented out of the building safely through stainless steel piping also known as “quench” pipes.

A quench is a short rapid burst of super cold air directed through the pipe to the outdoors. Since helium gas can reach temperatures as cold as -451ºF [-268ºC], uninsulated bare piping can freeze and burn human tissue within seconds when accidental contact is made. For this reason, project engineers specify insulation to be installed on cryogen vent piping for personnel protection.

Although MRI quench pipe insulation specifications vary, it is safe to install AEROFLEX EPDM™ insulation on MRI quench vent pipes when the correct thickness is installed to ensure personnel protection. Even though our insulation is rated down to -297ºF [-182ºC], it will be unaffected by short intermittent bursts of helium gas.

Please contact technical support if you would like to discuss your MRI application.