

SilentSHIELD™ soundproofed RF Door for MRI

A critical part of the RF shielding of an MRI room is the door. While having to fulfil its primary task of shielding RF fields, it must be easy for technicians to use, perform its function over a long period and look attractive to reassure patients. Because of its lightweight construction, ergonomically designed handles and safety release on the inside, the IMEDCO® RF door is easy and safe to use.

The power of MRI equipment is increasing continuously to meet the demand for better and faster images and this trend is expected to continue. The more powerful equipment generates more audible noise and is likely to come into conflict with stricter health and safety regulations on workplace sound levels. IMEDCO has therefore introduced the new **SilentSHIELD** RF door with soundproofing.

The sandwich structure of the new door with a core of insulating material and a newly designed acoustic seal around the edge reduce the noise level outside the room by more than 40 dB.



Features

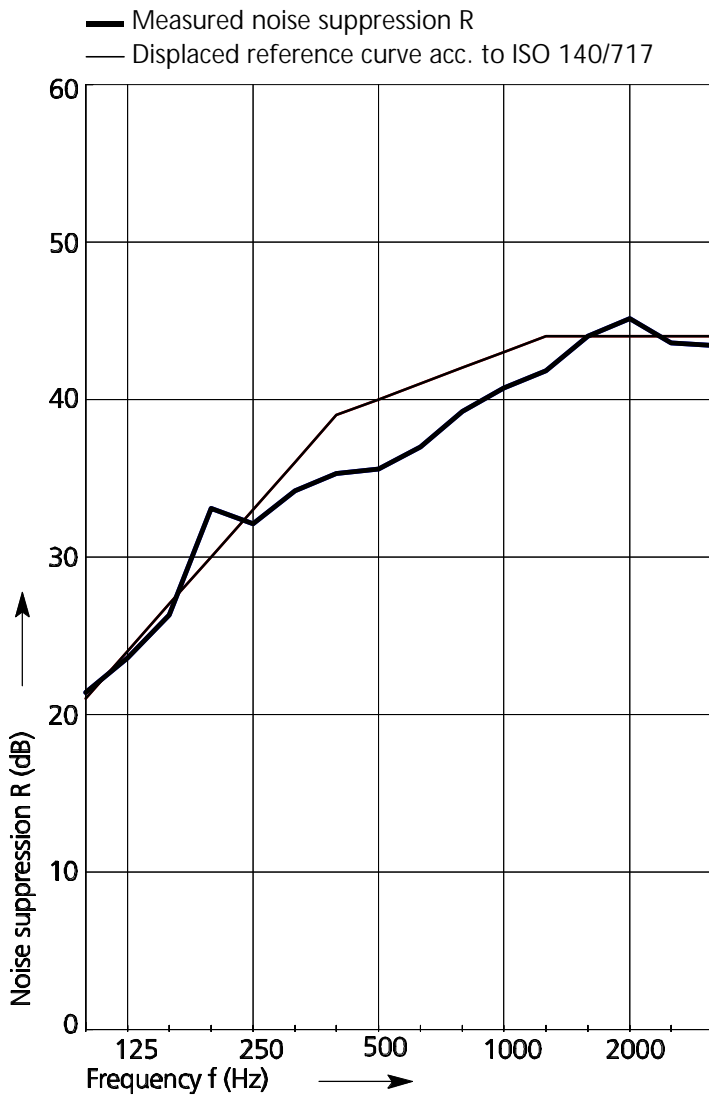
- Excellent **SilentSHIELD** soundproofing characteristics ($R_{f1600} = 44$ dB, $R_w = 40$ dB)
- Acoustic testing by an independent laboratory according to standard ISO 140/717
- Special sliding acoustic seal designed for easy opening and closing
- Standard dimensions 1200 mm x 2100 mm
Other sizes also available
- High RF attenuation
- Optional lock with safety release on the inside
- Flush threshold permits free access for beds, wheelchairs and helium dewars
- Easy and quick replacement of all parts subject to wear such as contact fingers and the soundproof seal
- U.S. Patent No. 6,519,899
- IMEDCO works quality management certified according to ISO 9001

Medical RF & Magnetic Shielding Specialists – Worldwide

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Noise suppression in relation to frequency



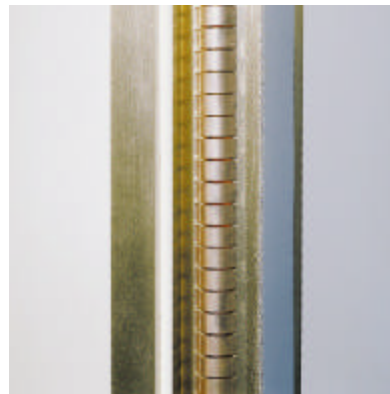
Standard RF attenuation

Magnetic field	15 MHz	100 dB
Electric field	10 MHz	100 dB
	30 MHz	100 dB
Plane waves	30 MHz	100 dB
	100 MHz	100 dB
	130 MHz	100 dB

Other attenuations on request

Noise suppression

Attenuation of door including frame	$R_{f1600} = 44 \text{ dB}$ $R_w = 40 \text{ dB}$
Permissible variation	4,4 dB bei 500 Hz



Sandwich door structure with insulating core, RF contact fingers and two acoustic edge seals

5-BE

While the RF door may be the most obvious RF component when considering acoustic improvements of the enclosure, its overall effectiveness will be determined by the rest of the RF enclosure design. IMEDCO also offers **SilentSHIELD** windows, walls and ceilings for these purposes. Higher acoustic attenuation performance can be achieved by proper preparation of the building.

The IMEDCO **SilentSHIELD** system has been tested by an independent laboratory. Consult IMEDCO on all questions related to RF and magnetic shielding and soundproofing. Take advantage of our expertise and experience that has been gained from the installation of more than 2000 IMEDCO shielded enclosures worldwide.

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In the interest of technical progress we reserve the right to change without notice our products or their technical data.



IMEDCO AG
 Industriestrasse West 14
 CH-4614 Högendorf
 Switzerland
 Phone +41-62-209-40-20
 Fax +41-62-209-40-29

imedco@imedco.ch
 www.imedco-shielding.com