

# VAC – THE WORLD'S LEADING MANUFACTURER OF MAGNETICALLY SHIELDED ROOMS

## One-Stop Shop – from raw materials to the finished Magnetically Shielded Room (MSR)

### VACOSHIELD®

- More than 30 years of experience in design and construction result in superior product quality
- Optimum shielding performance over the entire frequency range from DC up to 1 GHz
- High quality standard shielding rooms
- Customized solutions possible



### ADVANTAGES OF VAC MSR

- More than 150 MSRs have successfully been installed worldwide
- Preselection of top quality material lots
- Excellent R&D, engineering and customer support
- Great design flexibility
- Measurements of environmental disturbance
- Fast set up and construction times
- Modular design allows dismantling and reassembly at other sites

ADVANCED MATERIALS – THE KEY TO PROGRESS

**VAC**®  
VACUUMSCHMELZE

# VACOSHIELD

VAC is offering the following three MSR solutions as standard products, all made with VAC's nickel-iron high permeability alloy MUMETALL®.

## VACOSHIELD ADVANCED

VACOSHIELD Advanced is VAC's top-selling two-layer MSR solution. The complementing highly conductive aluminum layer provides the necessary magnetic shielding at higher frequencies. The rooms are built with a special I-beam construction that gives stability and fulfills static requirements.

## VACOSHIELD PREMIUM

The Premium version is an upgraded three-layer MSR product. It is used at sites with over-average environmental magnetic noise.

## CUSTOMIZED SOLUTIONS

VAC is offering customized high-end MSR designs.

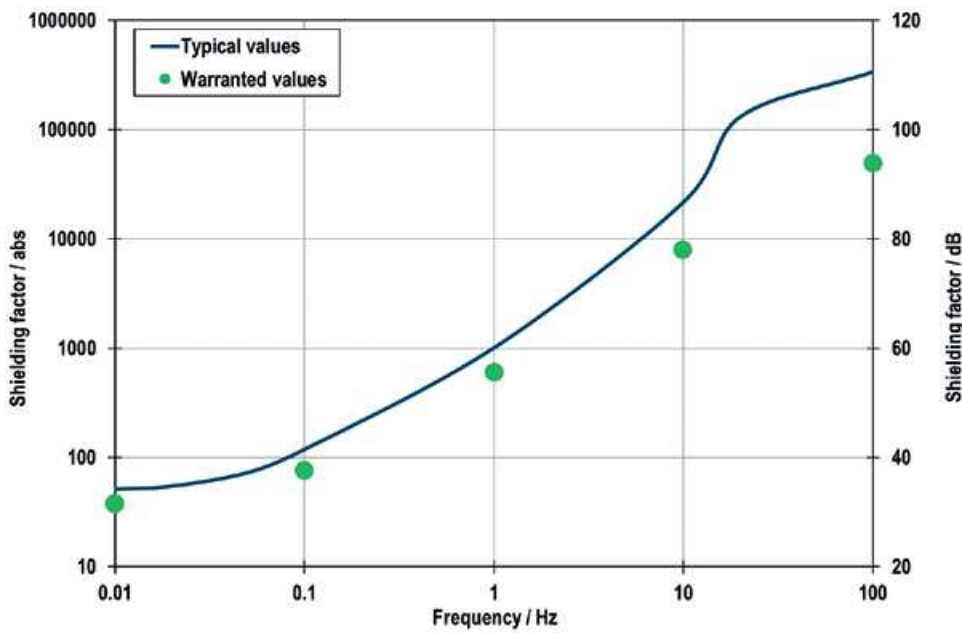
## VACOSHIELD FACTS

|  | VACOSHIELD Advanced*<br>*former Ak3b   | VACOSHIELD Premium                                 |
|--|--|--|
| Total Weight                                       | 7.5 t  | 10.0 t   |
| Shell Structure                                    | MUMETALL /<br>aluminum /<br>MUMETALL   | MUMETALL /<br>MUMETALL /<br>aluminum /<br>MUMETALL |
|  | Single shells supported on an I-Beam structure   |  |
| Usable Inner Dimensions<br>Length x Width x Height | 4.0 x 3.0 x 2.4 m<br>13.1 x 9.8 x 7.9 feet   |  |
| Hinged Door  | Pneumatically assisted door locking system<br>Level or threshold entry   |  |
|  | 1.0 m (width) x 2.0 m (height)<br>3.28 feet (width) x 6.56 feet (height)   |  |
| Standard Fittings                                  | All MSR's include feedthroughs for ventilation, visual projection and cables.<br>Additional customized feedthroughs possible.<br><br>Dimmable, low voltage halogen spots assembled along the side walls.<br>Emergency illumination in case of power breakdown included. LED solution possible.<br><br>Variable, clinically adapted interior and exterior white coloured wall finish as a standard. |  |

### WARRANTED SHIELDING FACTORS OF VACOSHIELD

| Frequency<br>f/Hz  | VACOSHIELD Advanced*<br>*former Ak3b |                               | VACOSHIELD Premium           |                               |
|--|--------------------------------------|-------------------------------|------------------------------|-------------------------------|
|  | Warranted<br>value<br>S [dB]         | Warranted<br>value<br>S [abs] | Warranted<br>value<br>S [dB] | Warranted<br>value<br>S [abs] |
| Values are based on<br>low external fields of<br>$1 \mu T_{rms}$ |                                      |                               |                              |                               |
| DC   | 54                                   | 500                           | 70                           | 3,000                         |
| 0.01 Hz  | 32                                   | 38                            | 40                           | 100                           |
| 0.1 Hz   | 38                                   | 75                            | 48                           | 250                           |
| 1 Hz   | 56                                   | 600                           | 66                           | 2,000                         |
| 10 Hz  | 78                                   | 8,000                         | 92                           | 40,000                        |
| 100 Hz   | 94                                   | 50,000                        | 106                          | 200,000                       |

### TYPICAL SHIELDING FACTORS OF VACOSHIELD ADVANCED 3 X 4 M (13.1 X 9.8 FT)



The typical values have been determined by real data of VAC MSRs.

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