## 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



#### **VACOSHIELD**

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

#### **VACOSHIELD BASIC**

VACOSHIELD Basic is the basic version, aiming towards weight and cost reduction. The core material of prefabricated wall elements is very light and at the same time provides stability to the MSR. Due to the reduced weight, VACOSHIELD Basic can be placed on upper levels.

#### **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.

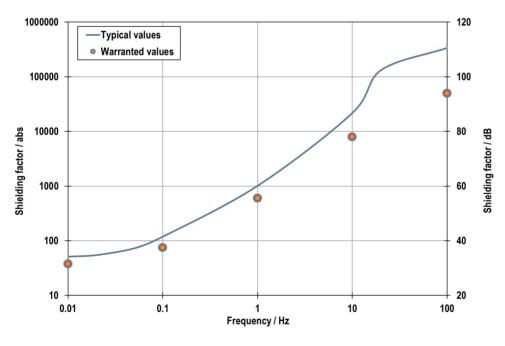
#### **VACOSHIELD FACTS**

	VACOSHIELD Basic	VACOSHIELD Advanced* *former Ak3b	VACOSHIELD Premium			
Total Weight	4.5 t	7.5 t	10.0 t			
Shell Structure	MUMETALL / aluminum / aluminum / MUMETALL	MUMETALL / aluminum / MUMETALL	MUMETALL / MUMETALL / aluminum / MUMETALL			
	Prefabricated wall elements	Single shells supported on an I-Beam structure				
Usable Inner Dimensions Length x Width x Height	3.9 x 2.9 x 2.3 m 12.8 x 9.5 x 7.5 feet	4.0 x 3.0 x 2.4 m 13.1 x 9.8 x 7.9 feet				
Hinged Door	Manual lock principle Threshold entry	Pneumatically assisted door locking system Level or threshold entry				
	1.0 m (width) x 2.0 m (height) 3.28 feet (width) x 6.56 feet (height)					
	All MSR's include feedthroughs for ventilation, visual projection and cables.  Additional customized feedthroughs possible.					
Standard Fittings	Dimmable, low voltage halogen spots assembled along the side walls.  Emergency illumination in case of power breakdown included. LED solution possible.					
	Variable, clinically adapted interior and exterior white coloured wall finish as a standard.					

#### WARRANTED SHIELDING FACTORS OF VACOSHIELD

Frequency f/Hz	VACOSHIELD Basic		VACOSHIELD Advanced* *former Ak3b		VACOSHIELD Premium	
Values are based on	Warranted	Warranted	Warranted	Warranted	Warranted	Warranted
low external fields of	value	value	value	value	value	value
$1 \mu T_{rms}$	S [dB]	S [abs]	S [dB]	S [abs]	S [dB]	S [abs]
DC	48	250	54	500	70	3,000
0.01 Hz	24	15	32	38	40	100
0.1 Hz	30	30	38	75	48	250
1 Hz	46	200	56	600	66	2,000
10 Hz	62	1,300	78	8,000	92	40,000
100 Hz	74	5,000	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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ADVANCED MATERIALS – THE KEY TO PROGRESS