

# Absorbers

## Non-Combustible Pyramid Absorbers in Thin-Film Technology

The Franko<sub>sorb</sub><sup>®</sup> RF absorbers are constructed in the so-called "thin film" technology which totally replaces the carbon filled foam absorber technology. This gives the Franko<sub>sorb</sub><sup>®</sup> RF absorber the following significant advantages:

- High absorption capability
- No aging or drooping problems
- Non-combustible acc. to DIN 4102, fire-class A2
- Weatherproof
- Low ongoing ownership costs
- High repeatable performance characteristics
- Non-toxic waste
- No carbon dust

The mechanical realization of the absorber shape is independent from the absorbing function, realized by the resistance film. The shape of the absorber can be made of a light-weight non-combustible, weatherproof and otherwise suitable material. In comparison, the absorber film is very thin. Typically it has a thickness of 10 µm. Consequently, all the advantages of the "shape material" also holds for the complete absorber.

- The absorbing foil is situated on the surface of the absorber and mounted directly on the shape material. Consequently, it can transfer absorbed energy very effectively to its surrounding and the absorber is capable of resisting very high field strength.
- Transportation volume is low because the hollow construction allows stacking.
- All the material in the thin-film technology absorber is non-toxic and non-combustible according to DIN 4102 class A2.
- Franko<sub>sorb</sub><sup>®</sup> pyramid absorbers (fire class A2 and B2) fulfil the requirements for cleanroom compatibility acc. to ISO 14644-1, class 5.

## Hybrid Absorbers

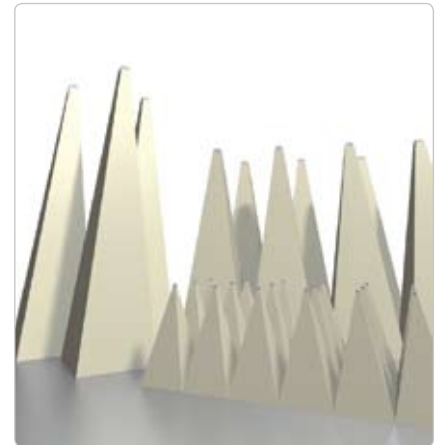
Hybrid Absorbers are a combination of ferrite absorbers with impedance matched pyramid absorbers installed in front of them. The hybrid absorbers combine the advantages of:

- Ferrite absorbers with good attenuation characteristics starting at 30 MHz and being flat
- Short pyramid absorbers with good attenuation characteristics up to the high GHz range

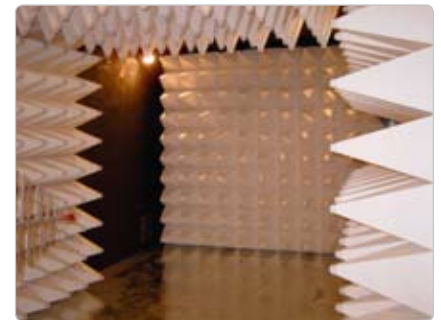
Hybrid absorbers are a good solution for smaller rooms (e.g. 3 m test range) with restricted external dimensions and frequency ranges from 30 MHz up to approx. 20 GHz.

## Customized Solutions

A combined arrangement of pyramid and hybrid absorbers is also possible if the available space requires special solutions for best performance.



Pyramid absorbers / thin-film technology



Hybrid absorbers with non-combustible pyramid absorbers / thin-film technology

**FRANKONIA IS THE ONLY  
MANUFACTURER WORLDWIDE  
WHO PRODUCES NON-COMBUSTIBLE  
ABSORBERS ACCORDING TO  
FIRE-CLASS DIN 4102 A2**



Hybrid absorber, thin-film technology