

## WIMA Plastic Film Capacitors for Medical Applications



When it comes to saving lives, there should be no compromises in the quality of electronic components to be made. WIMA's large market share in the medical equipment industry is based on the high quality of our manufacturing only in Germany. WIMA, Made in Germany!



WIMA capacitors are the first choice for medical applications due to:

- excellent electrical parameters and the resulting performance
- extremely safe reliability and field failure rates against 0
- highest life expectancy of sometimes more than 20 years
- maximum mechanical stability even under harsh operating conditions
- unrestricted use also under critical environmental conditions (temperature/moisture)
- absolutely uncritical end-of-life scenario.

### Applications

Pulse-resistant WIMA Polypropylene capacitors of the MKP 10 and FKP 1 series ensure reliable shock release in **Defibrillators** to stop ventricular fibrillation and maintain a normal heart rhythm.

For decades, WIMA PET capacitors in a small SMD design have been used reliably in **Ventilators** in intensive care units worldwide.

The spectrum of WIMA capacitors used in **MRT's** (magnetic resonance tomographs) cover a wide range from standard PCM 5

to self-healing MKP 4 to high-pulse-resistant FKP 1 capacitors. RFI capacitors need not only satisfy EMC requirements in suppressing outgoing interferences but they also have to protect the application from incoming power surges. Hence careful selection of these components is essential.

**Laser technology** is an integral part of medical technology. WIMA supplies double metallized MKP 10 Polypropylene capacitors, Snubber capacitors or special GTO capacitors for capacitor banks to reliably support the high energy requirements of a medical laser.

### WIMA Capacitors for Medical Equipment:

#### SMD Capacitors (PET, PEN, PPS)

With the smallest size codes 1812, our metallized SMD capacitors are available in three different dielectrics. With regard to ambient temperatures, the ranges of 105° C, 125° C and 140° C can be covered. WIMA SMD capacitors are self-healing and highly reliable over an operational service life expectancy of more than 300,000 hours.

#### Capacitors with PCM 5 mm

The disadvantage of a larger design compared to ceramic capacitors is more than compensated with these WIMA miniature capacitors by an almost unlimited life expectancy, by superior electrical parameters or the ability of self-healing.

#### MKP 4 / MKP 10 Capacitors

Of a slightly larger design, these self-healing Polypropylene capacitors are far superior to electrolytic capacitors in terms of lifetime or reliability. The problems associated with electrolytic capacitors, such as dry-out-effect or leaking electrolyte are excluded with dry technology WIMA plastic film capacitors. With regard to high-frequency application conditions, these single-sided (MKP 4) or double-sided (MKP 10) metallized WIMA capacitors are also preferable to any other capacitor technology.

#### FKP 1 Pulse Capacitors

A film/foil construction with internal series connection guarantees the highest pulse



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load capacity of all capacitor technologies. The metallized floating electrode ensures reliable self-healing. In sum: the high-end capacitor from WIMA.

**RFI Capacitors Class X2, X1 and Y2**  
WIMA RFI capacitors show the best possible self-healing ability due to their metallized structure. The RFI series score due to their compact design, the wide capacitance range and the cost-effective Polypropylene dielectric. The WIMA RFI capacitors are approved according to IEC 60384-14/4,

UL 60384-14/CSA-E60384-14 and CQC11-471115-2016.

**Snubber and GTO Capacitors**  
With various contact configurations and a low-inductive design, these metallized Polypropylene capacitors deliver high capacities, are self-healing and suitable for use under high-frequency application conditions with almost unlimited operational life expectancy. Screwable plates or axial M6 or M8 screw connections guarantee a safe flow even of very high currents.

**Corona pandemic!**  
As a system-relevant manufacturer of electronic components for medical technology, WIMA has reliably served the high worldwide demand of manufacturers of ventilation and/or humidification systems. Special shifts in the WIMA plants ensured timely deliveries.



**WIMA SMD Capacitors**  
Dielectric: PET, PEN, PPS  
Size codes: 1812 to 6054  
Capacitance values: 0.01  $\mu\text{F}$  to 6.8  $\mu\text{F}$   
Voltage ranges: 63 VDC to 1000 VDC



**WIMA Capacitors with PCM 5 mm**  
Dielectric: PET, PP  
PCM: 5 mm  
Capacitance values: 33 pF to 10  $\mu\text{F}$   
Voltage ranges: 50 VDC to 1000 VDC



**WIMA MKP 4 / MKP 10 Capacitors**  
Dielectric: PP  
PCM: 7.5 mm to 52.5 mm  
Capacitance values: 1000 pF to 47  $\mu\text{F}$   
Voltage ranges: 100 VDC to 3000 VDC



**WIMA FKP 1 Pulse Capacitors**  
Dielectric: PP  
PCM: 15 mm to 52.5 mm  
Capacitance values: 100 pF to 4.7  $\mu\text{F}$   
Voltage ranges: 400 VDC to 6000 VDC



**WIMA Capacitors Class X2, X1 and Y2**  
Dielectric: PP  
PCM: 7.5 mm to 37.5 mm  
Capacitance values: 1000 pF to 10  $\mu\text{F}$   
Voltage ranges: 300 VAC to 440 VAC



**WIMA Snubber and GTO Capacitors**  
Dielectric: PP  
Contacts: plates or axial screw connection  
Capacitance values: 0.01  $\mu\text{F}$  to 100  $\mu\text{F}$   
Voltage ranges: 400 VDC to 4000 VDC