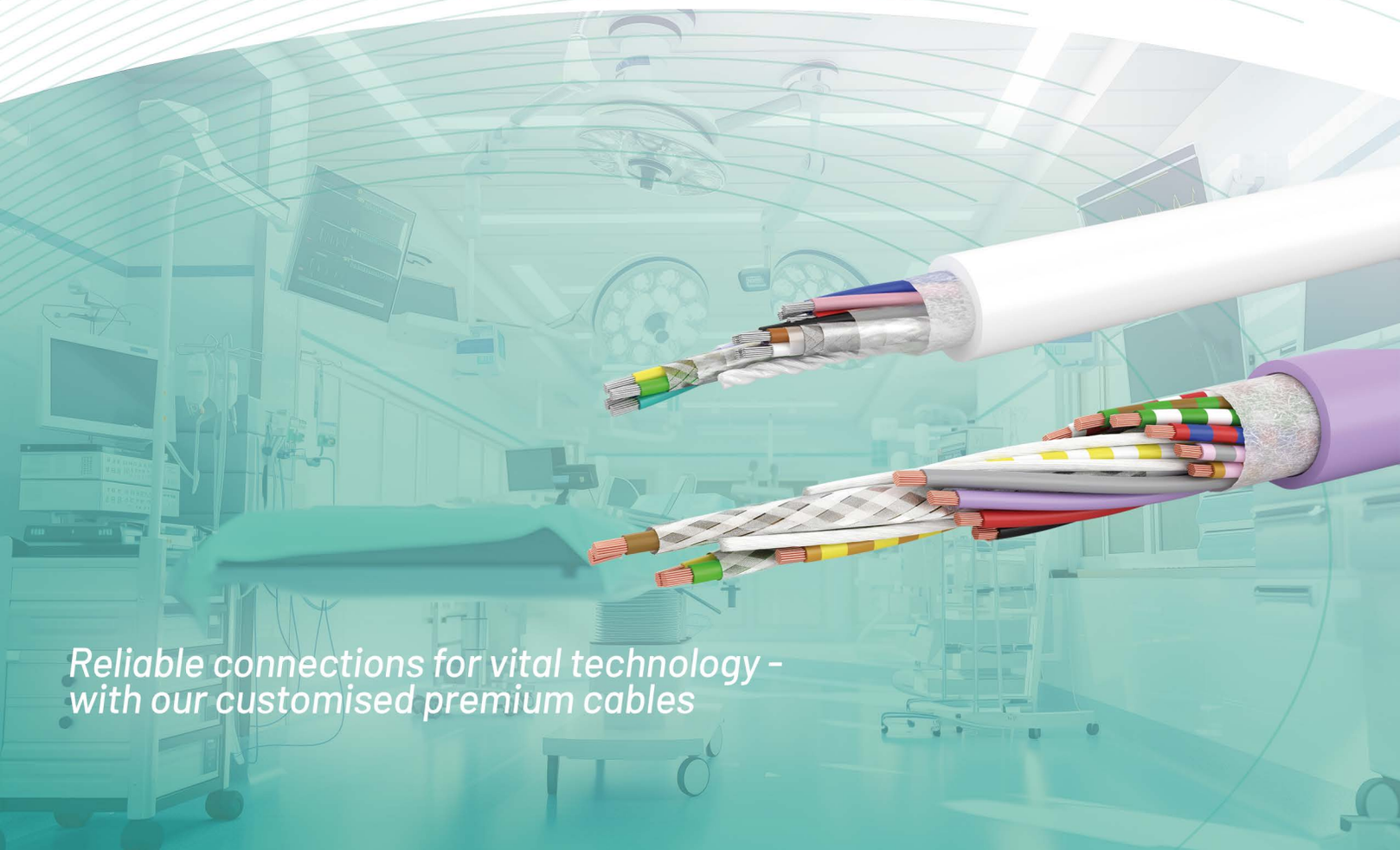
MEDiKabel

Cables & Wires for
Medical technology



Reliable connections for vital technology -
with our customised premium cables

Cables & Wires for
Medical technology

Medical technology requires maximum precision, safety and reliability. In sensitive areas such as dentistry, mammography, laboratory diagnostics and imaging procedures, secure connections are the basis for flawless functionality and thus for the best possible patient care.

MEDiKabel develops specialised cables and special lines that are precisely tailored to the high demands of medical technology. Our products are used in a wide range of medical technology applications, including dentistry, mammography and laboratory diagnostics. Typical applications include the wiring of hospital beds, flexible cables for endoscopy and heavy-duty connections in X-ray systems. The focus is not only on technical excellence, but also on reliability, durability and user-friendliness.

Thanks to our experience and innovative strength, we offer solutions that are individually tailored to the requirements of our partners. Whether it's highly flexible cables for moving applications, radiation-resistant cables in radiology or particularly hygienic materials for use in laboratories, practices and hospitals – we deliver the connection that counts.

With this catalogue, we would like to give you an overview of our range of services and show you the technical possibilities of our special cables. Together with our customers, we are shaping the medical technology of today and tomorrow.

CABLE SOLUTIONS FOR AREAS OF APPLICATION OF MEDICAL TECHNOLOGY


Dentistry


Patient monitoring


MRI


Monitoring

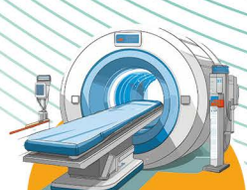

Endoscopy


Aesthetics


X-ray Imgaging


Mammography / CT


Laboratory Diagnostics

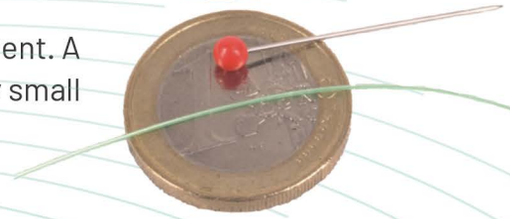

Radiation Therapy / Patient Positioning

EXAMPLES OF APPLICATIONS FOR OUR CABLES IN MEDICAL TECHNOLOGY

In medical technology, insulation materials must meet a high set of requirements: not only do they ensure electrical safety, they must also be flexible and mechanically resilient so that cables are not damaged by frequent movement or tight bending radii. At the same time, the selection of biocompatible materials in accordance with DIN EN ISO 10993 is crucial in order to rule out health risks in the event of skin or body contact. In addition, high chemical resistance is necessary, as cables in everyday medical use regularly come into contact with alcohol-based disinfectants, aggressive cleaners and other chemicals. Only materials that combine safety, flexibility, robustness and resistance to external influences can guarantee the long-term reliable functioning of medical devices.

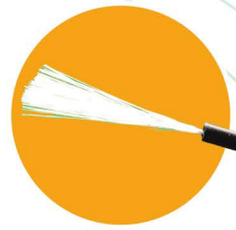
>> MINIATURE CABLES

The smallest cross-sections of 0.014 mm^2 guarantee interference-free use in brain research when measuring EEG currents. Skin-friendly – with maximum flexibility and resilience.



>> MINIATURE COAXIAL CABLES

These cables are used for image transmission in endoscopy equipment. A special manufacturing process for fluoroplastics enables extremely small outer diameters to be achieved.



>> PLASTIC CONDUCTOR

A copper metal conductor is not always the best choice. In highly sensitive devices such as X-ray machines or computer tomographs, metal conductors cause electromagnetic radiation and the resulting induction. The solution: plastic conductors for transmitting currents. The skin-friendly PUR sheath also protects the cable from mechanical influences.

>> MEDICAL DEVICE CABLES

Spiral cables from MEDi Kabel are also in demand among medical technology manufacturers, as they combine high flexibility, compact design and durability – ideal for mobile devices and everyday hospital operations.

EXAMPLES OF APPLICATIONS FOR OUR CABLES IN MEDICAL TECHNOLOGY

>> ENDOSCOPY

Our cables in endoscopy devices are specially designed for low-loss transmission of high-resolution image signals and secure energy and data flows. They are designed for minimal outer diameters, high flexibility and tight bending radii without compromising mechanical strength. The materials used are biocompatible and withstand repeated sterilisation and disinfection processes.

>> DEFIBRILLATORS

Our cables in defibrillators ensure interference-free transmission of ECG and control data. Optimised impedance and multi-layer shielding guarantee high signal quality and EMC safety in clinical use.

>> TREATMENT CHAIRS

Our cables in dental chairs reliably transmit power and control signals for drives, instruments and controls. They are flexible, mechanically resilient and designed for tight bending radii, ensuring a long service life in daily operation.

>> MONITORING

Our cables for medical monitoring are designed for the reliable and precise transmission of sensitive biosignals such as ECG, EEG, SpO_2 and blood pressure data. Precisely controlled impedance ensures signal stability and minimises distortion, even during high-frequency measurements. Multi-layer shielding systems prevent electromagnetic interference (EMI) and crosstalk between lines, ensuring signal quality even in complex clinical environments. Our cables are characterised by high flexibility and low intrinsic capacitance, which reduces motion artefacts and increases patient comfort. At the same time, robust insulation and biocompatible sheathing materials offer safety and resistance to disinfection and repeated clinical use. In this way, they contribute significantly to the accuracy and reliability of monitoring systems in everyday medical practice.

Our Manufacturing capabilities in Medical technology

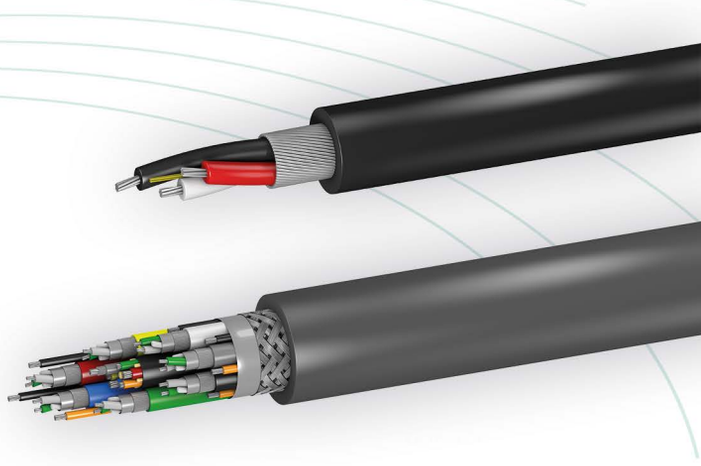
As a leading distributor, we develop and design cables and special cables that are specifically tailored to the high demands of medical devices. Thanks to our wide range of high-quality materials, we can respond flexibly to individual customer requirements and implement tailor-made solutions – from particularly flexible cables to chemically resistant and biocompatible variants. The following overview shows an excerpt from our diverse manufacturing capabilities and illustrates how we convert your specific requirements into practical products.

>> INSULATION AND JACKET MATERIAL

- TPE (-E, -S, -O)
- FEP
- ETFE
- mPPE
- silicone
- PFA
- PTFE
- FRNC
- PVC
- PE / cell-PE
- PP / cell-PP
- PA
- Kapton
- PUR (e.g. M3-PUR)

>> CONDUCTOR MATERIALS

- **copper wires / copper strands** (multi wire, fine wire , or ultra-fine wire)
- bare, tinned, silver-plated, gold-plated or nickel-plated
- **steel strands** copper-plated or galvanised
- **steel copper conductor** (steel/copper alloy with high tensile strength and low flexural strength)
- **alloy conductor** (copper alloy with high tensile strength and flexural strength)
- **tinsel conductor**
- **aluminium conductor**
- **plastic conductor** (carbon fibre)
- **glass fibre**



>> PROPERTIES

- autoclavable
- biocompatible according to DIN EN ISO 10993
- skin-friendly
- antimicrobial
- sterile & germ-free
- UL/CSA version available
- good resistance to alcohol-based cleaning products

>> CABLES & WIRES

- cross-sections from 0.014 to 95 mm^2
- shielded and unshielded variants
- hybrid and combination cables possible
- small quantities available from 300 or 500m

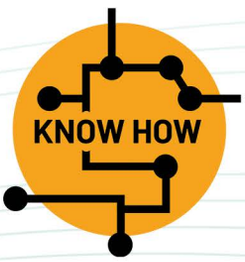
your strong partner for
cables & wires
in **medical technology**

MEDiKabel

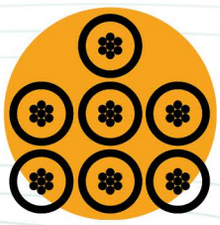
We will be happy to provide you with customized solutions for your medical applications on request – simply get in touch with us.

consulting & development

sample production possible from 100m



system setup, qualification



series production, storage & logistics

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