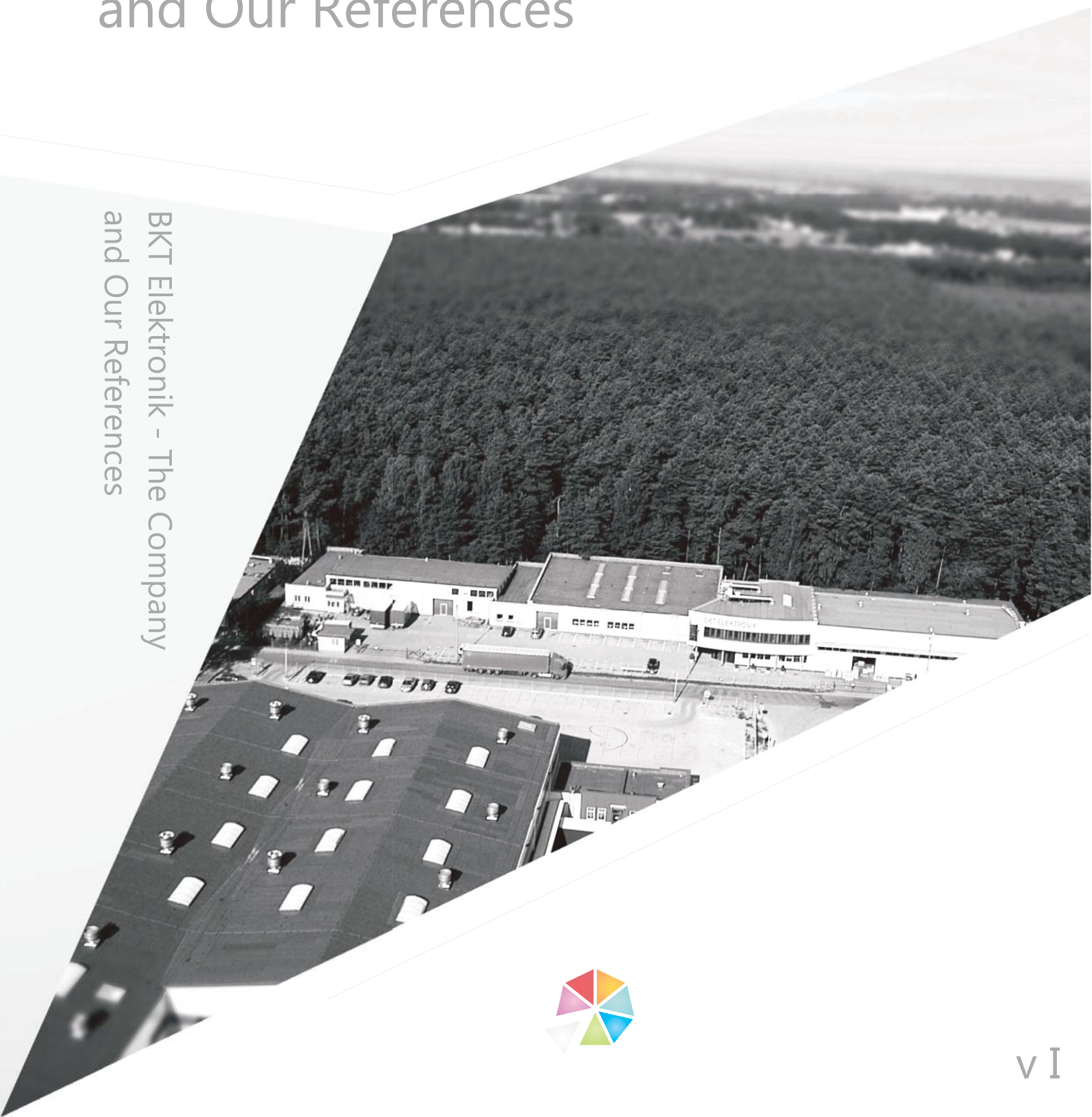


BKT Elektronik - The Company and Our References

BKT Elektronik - The Company
and Our References





Polish producer – information and communication technology leader

BKT Elektronik has been successfully creating and delivering solutions in the IT infrastructure for 15 years.

The company has been consistently hiring professions who work with passion in production, sales and R&D areas and, consequently, allow us to develop and offer solutions complying with the most demanding expectations of our customers.

Diamant
miesięcznika
Forbes
2012



Systematically expanded production and warehousing space as well as investments in a modern machinery stock make BKT Elektronik's products fulfil all market requirements concerning quality, comprehensiveness of solutions and availability. Additionally, our products are economically attractive.

Thanks to functioning ISO 9001-2000 and ISO 14001 quality management systems as well as implemented state-of-the-art IT systems, BKT Elektronik can fulfil even the most stringent warranty requirements in relation to our products that were manufactured with the use of the highest quality components delivered only by qualified and renowned suppliers from all over the world.

A comprehensive product offer is only a fraction of BKT Elektronik's actions aimed at satisfying and fulfilling customers' needs. We support our trading activities with numerous training courses, seminars and conferences that let our partners and customers become familiar with the latest world solutions. Additionally, a close contact with the market provides us with an opportunity to promptly and flexibly react to the market's needs.



- 1998 - establishment of the company and commencement of production and trading activities
- 2000 - launch of production lines for optical-technical and optical-telecommunication products
- 2002 - launch of production of communication cabinets, telecommunications cabinets and accessories for cabinet equipment
- 2003 - establishment and development of the export department dedicated to the European market
- 2004 - relocation of production to new buildings located in Białe Błota at ul. Łochowska 69
- 2005 - acquisition of the official status of an exclusive representative of DRAKA within the territory of Poland
- 2006 - substantial investments and expansion of production and trading facilities in Białe Błota
- 2007 - opening of commercial branches in Gdańsk and Warsaw
 - implementation of an integrated and multi-module Microsoft Dynamics AX management support system
- 2008 - certificate pertaining to the existing structured cabling system, implementation of the DRAKA brand
- 2009 - further substantial development of production halls and warehouse space in Białe Błota
- 2010 - establishment of a design office in Katowice
 - the company is granted a licence to produce E2000 connectors
- 2011 - substantial investments in the machinery stock and expansion of warehouse space
- 2012 - establishment of a sales office in Cracow
- 2013 - 2014 – signing and performance of contracts pertaining to construction of provincial broadband networks including the biggest currently executed broadband network project – Internet for Mazovia – function: General Order Supplier – the constructed infrastructure comprises 3600 km of an optical fibre network
- 2014 - the company was granted a certificate from an independent accreditation body, Uptime Institute, pertaining to designing Data Centres
- 2014 - implementation of 40GbE solutions based on copper class G/category 8 (pursuant to electrical values determined in ISO/IEC 61076-3-104/2GHz/Ed. 3.0(CD,2012-08).

Technological capabilities



Production of communication cabinets and external enclosures



Production of BKT ELEKTRONIK'S structured cabling



Optical fibre production



R&D Department

Our R&D team is composed of the best specialists who are very passionate about what they do. The main task of the research and development team is converting the needs and experiences of system and product users into ready and, on numerous occasion, customised solutions. We are continuously searching for new ideas while modernising the existing ones and launching new products.

Before a product is launched under the BKT ELEKTRONIK brand it should demonstrate quality and functionality in strict indoor and outdoor tests.

Certificates issued by independent accredited laboratories confirming compliance with Polish and European standards are evidence that we attach importance to the quality of our products:

- The National Institute of Telecommunications – National Research Institute in Warsaw
- GHMT AG – Gesellschaft für Hochfrequenz Mess Technik Bexbach in the Federal Republic of Germany
- 3P – Third Party Testing Hoersholm in Denmark
- Telecommunication devices and equipment quality testing laboratory at the University of Technology in Szczecin
- ▣ Accredited Tier Designer ATD Certificate – Uptime Institute in the USA



Design and technical support

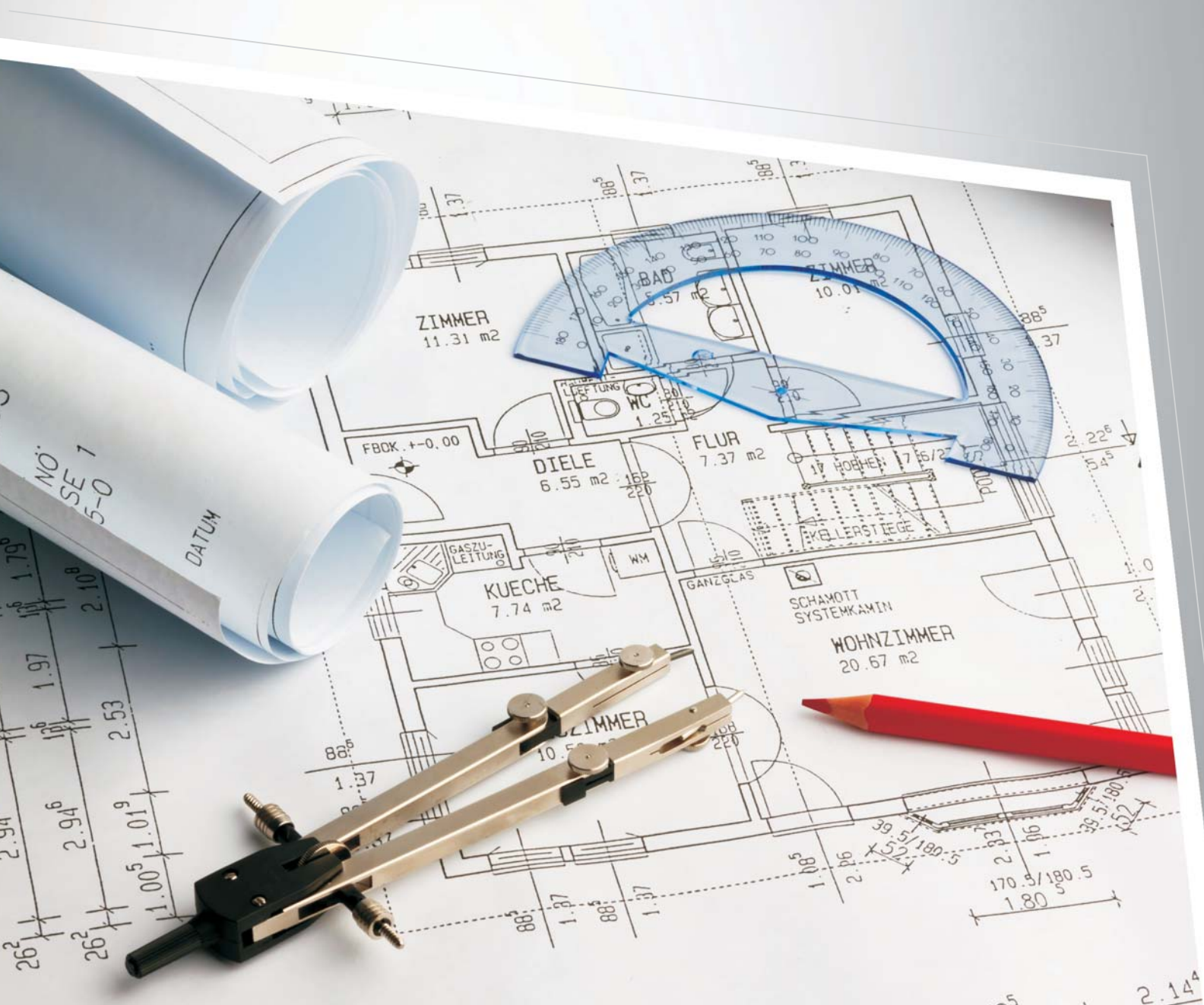
- Investment preparation – design and budget objectives
- Conceptual designs
- Project coordination
- Expertises, opinions, technical support

A properly selected team of employees working in the design department treats arrangements pertaining to quality requirements with full commitment when concluding a contract or accepting and executing orders. Our engineers regularly participate in cycles of specialist training courses, continuously improving their professional qualifications.

Whenever preparing a project our engineers cooperate with designers and concentrate on the three most significant aspects: function of a given facility, the needs of future users and future plans of potential investment expansion.

Such attitude makes it possible to avoid erroneous design objectives which often render it impossible to implement many further solutions during project execution, including those that pertain to integrated safety systems or telecommunications networks.

Considering all elements of a project – architecture, construction technologies, equipment, automation, assembly – is one of the conditions of safe and efficient functioning of the future infrastructure.





Customer service

Every day over 60 persons employed in the sales department maintain relations with customers and build the market position of our products. Our qualified staff makes it possible for us to effectively operate on the European and world markets by promoting and selling BKT Elektronik's products and systems.

Our four commercial branches and the engineering support of the Design Office offer not only professional service along with repair and maintenance services, but also guarantee comfort of proper performance of each installation. This is shown by thousands of executed orders and hundreds of references from our satisfied customers.



Offer

Communication cabinets

The assortment of BKT Elektronik includes communication cabinets. Metal cabinets, enclosures and accessories are used to enclose passive and active 10-inch, 19-inch and 21-inch network devices.

A particularly important element is choosing the right server rack, network rack and telecommunications cabinet. This first step has a significant impact not only on the installed cooling, fire extinguishing and power systems, but also functionality of the entire system for the end user.

The simplicity of construction combined with the highest quality and functionality of this type of assortment is indicative of its high functional properties. New technologies used during production let us achieve optimal parameters: stiffness, breathing properties (82%) and bearing capacity of 1500 kg. The racks and cabinets have a welded and modular design. A wide variety of offered racks, cabinets as well as numerous ICT accessories allow every configuration complying with a customer's wish and needs.

Our portfolio comprises standard cabinets that can be used in ICT networks as distribution points as well as technically advanced BKT 4DC cabinets dedicated to solutions implemented in modern Data Centres, collocation centres and server rooms. They are one of the highly technologically advanced elements of the entire infrastructure.



Offer

Sealed outdoor and indoor cabinets, heating and cooling systems

Protecting devices from variable environmental conditions as well as vandalism and damage is a significant issue.

Outdoor and indoor cabinets are installed in publicly accessible places and places that have a negative effect on their functioning. No matter where installed, they have to provide safety for the equipment installed inside of them.

A well thought-out and thoroughly tested special structure of our cabinets, created with the use of the most modern production and metal working technologies, guarantees fulfilment of all requirements outdoor and indoor cabinets have to meet including 30 years of operating life determined by the independent Research Laboratory.

All outdoor enclosures produced by our company have been successfully tested pursuant to the standards below:

- a full cycle of climatic tests for climatic conditions as per PN-ETSI EN 300 019-1-4 class 4.1, Test A- Cold – PN-EN 60068-2-1:2007 and Test B – Dry Heat – PN-EN 60068-2-2:2007 Test B
- Sunshine test – PN-EN 60068-2-5.
- Acoustic test – PN-EN- ISO 11200.
- Vibration test – PN-EN 60068-2-6.
- Mechanical resistance test – PN-EN 60439-5.
- Level of IP protection – PN-EN 60529

Cabinets are produced with observance of requirements determined in the certificates below:

- ISO 9001:2008
- ISO 14001:2004
- EN ISO 15085-2
- EN ISO 3834-2



Structured Cabling System

Modern data exchange systems require appropriate cabling which provides the opportunity to build an information transmission infrastructure based on copper and optical cable technology.

By using its long experience on the teletechnical market and considering the needs and interest of customers, BKT Elektronik created a unique Structured Cabling System called DRAKOM. BKT Elektronik's system comprises the best in class complete offer of products used for structural network construction. It ensures fast and effective connection of building communication networks and equipment operating in them. Thanks to many groups of products characterised by differentiated, but compatible technical products the system allows precise and flexible adjustment of network configuration and parameters to the current and future needs of users.

Panels, outlets and modules of BKT Elektronik's Structured Cabling System have, among others, GHMT and 3P certificates as well as certificates of the National Institute of Telecommunications. Additionally, the ISO 9001 system developed by the company over many years requires us to maintain stable measuring parameters conforming with the newest standards and provide continuity and repetitiveness of production. Passive elements comply with requirements of category 5e (class D), category 6 (class E), category 6A (class EA), category 7 (class F), category 7A (class FA) and the newest standardisation projects describing solutions of category 8.1, 8.2 (class II). BKT Elektronik organises training courses on the DRAKOM Structured Cabling System as well as certifies and grants a 25-year System Warranty. BKT Elektronik has a reference list of companies in which the structured cabling system functions reliably and lowered the costs in comparison to other equivalent systems. BKT Elektronik's system offers complete unscreened and screened solutions for small, medium and large ICT networks. It provides investors with access to the newest network solutions used with regard to designing and building modern Data Centres, collocation centres and server rooms.



Offer

Electrical Power Distribution Systems

As far as data exchange systems are concerned safety of electronic equipment is of significant importance. This is where modern power distribution units which split power and protect equipment collecting, processing and transferring data come in.

Modern communication cabinets and server rooms differ significantly from solutions used a dozen or so years ago. Modular equipment, cable organisation systems, markers, certain connections, aesthetics and safety are just a few characteristics which differentiate cabinets used with regard to ICT and widely understood automation that are available on the market. More stringent requirements are expected with respect to electrical power distribution systems. They are expected to adjust to sources of electrical power. Attention is also drawn to the number of receivers, load, protection and additional elements. When choosing the right power distribution units it is worth choosing BKT Elektronik's products. An extensive selection of products lets you easily choose a supply system adjusted to a particular application. The choice of the power distribution unit has to be well thought out. There are at least a couple of factors deciding about the final effect, safety and stability of operations of the acquired supply system. Consequently, you should choose the right plug on the input side, length of the power cord, power outlet as well as control and safety modules.



Offer

Optical fibre networks

Optical products belong to a yet another assortment group offered by BKT Elektronik. They are designed for setting up optical fibre broadband networks, FTTH networks, Data Centres and office building networks.

Over 15 years of experience in production of optical-technical goods resulted in the development of our own, high production standards recognized by our Polish and foreign customers. Know-how pertaining to optical cables, professional production equipment, specialized measuring equipment as well as properly configured production processes, developed and supervised by high-class experts, let us offer high quality products which comply with the requirements of the UPC and APC standards.

Our offer includes:

- ODF distribution boxes
- Distribution boxes to be placed in 19-inch cabinets
- Microducts
- Indoor optical fibre cables
- Outdoor optical fibre cables
- Universal optical fibre cables
- PRE-TERM cables
- Microcables
- ADSS cables
- Standard and Premium optical fibre pigtails
- Optical fibre patch cords (Simplex, Duplex, Mode Conditioning)
- MPO/MTP optical fibre patch cords
- Optical accessories – ODF distribution box and 19' cabinet equipment
- Subscriber outlets and panels
- Optical fibre ducting system
- Optical fibre enclosures
- Optical fibre cables offered by BKT Elektronik comprise optical fibres delivered by the well-known Japanese producer, Sumitomo.



References – BKT Elektronik's select investments

Voivodeship Broadband Network – Masovian Internet, infrastructure in construction includes 3 600 km of fiber optic networks

- Micro cable FO BKT 9/125 (6E – 144E)
- BKT Micro duct system
- BKT 19"-21" outdoor dual wall cabinet with chambers: energy, battery and panel, IP55 – covered with anti-graffiti finish
- Fiber optic equipment (Enclosures, FO panels, Pigtails, Adapters, Splice protectors, Splice cassettes)



References – BKT Elektronik's select investments

Voivodeship Broadband Network – Internet for Świętokrzyskie Voivodeship, infrastructure in construction includes 1 423 km of fiber optic networks

- Cable FO BKT A-DQ(ZN)2Y 9/125 (12E – 96E)
- BKT 19"-21" outdoor dual wall cabinet with chambers: energy, battery and panel, IP55 – covered with anti-graffiti finish



References – BKT Elektronik's select investments

Voivodeship Broadband Network – Internet for Podlaskie Voivodeship, infrastructure in construction includes 1 882 km of fiber optic networks

- Cable FO BKT A-DQ(ZN)2Y 9/125 (12E – 120E)
- Fiber optic equipment (Enclosures, FO panels, Pigtails, Adapters, Splice protectors, Splice cassettes)



References – BKT Elektronik's select investments

Voivodeship Broadband Network – Internet for Warmian-Masurian Voivodeship, infrastructure in construction includes 2 241 km of fiber optic network

- Cable FO BKT A-DQ(ZN)2Y 9/125 (12E – 156E)
- Fiber optic equipment (Enclosures, FO panels, Pigtails, Adapters, Splice protectors, Splice cassettes)



References – BKT Elektronik's select investments

Polish Ministry of Finance – „special server room in attic”

- the server room was constructed in an adapted attic and consists of over 100 industrial cabinets with IP55 protection rating and equipped with active air conditioning systems with specially dedicated chimney ducts as well as an environmental monitoring system.



References – BKT Elektronik's select investments

Ministry of Internal Affairs and Administration

- professional construction of a cold corridor basing on a comprehensive system of equipped server cabinets BKT4DC



References – BKT Elektronik's select investments

Euro-Centrum Science and Technology Park, Data Center TIER III DESIGN certificate

The project utilizes technologies designed and manufactured by BKT Elektronik. In executing the project our company delivered nine cold corridor constructions based on almost 100 server cabinets BKT4DC. The server room was equipped with a redundant powering system comprised of 170 three-phase power distribution units. The server room's data transmission was executed utilizing the certified class EA Structural Cabling System from BKT, ensuring data transmission of 10 GbE.



References – BKT Elektronik's select investments

AMU Foundation in Poznan

The project encompasses 59 server cabinets BKT4DC equipped with redundant energy systems basing on 120 network power management units that are equipped with integrated environment monitoring and access control systems. For this project BKT designed and executed a special system of cable ducts integrated into a row of lined up server cabinets. As a comprehensive solution, a Class E Structural Cabling System from BKT Elektronik was delivered.



References – BKT Elektronik's select investments

Copernicus Science Centre in Warsaw

- the building's data transmission is executed through the certified class EA Structural Cabling System from BKT Elektronik, ensuring data transmission of 10 GbE



References – BKT Elektronik's select investments

Henryk Reyman Stadium - Wisła Kraków

- the building's data transmission is executed through the certified class EA Structural Cabling System from BKT Elektronik, ensuring data transmission of 10 GbE.



References – BKT Elektronik's select investments

Jan Kochanowski University in Kielce

- the building's data transmission is executed through the certified class EA Structural Cabling System from BKT Elektronik, ensuring data transmission of 10 GbE.



References – BKT Elektronik's select investments

A. Jurasz University Hospital in Bydgoszcz

- as a comprehensive solution, a Class E Structural Cabling System from BKT Elektronik was delivered.



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