



kodar
group

DALEKOVODI
TRAFOSTANICE
TELEKOMUNIKACIJE
METALNE KONSTRUKCIJE I OPREMA

OVERHEAD TRANSMISSION
AND DISTRIBUTION LINES
POWER TRANSFORMER STATIONS
TELECOMMUNICATION NETWORKS
METAL CONSTRUCTIONS



U ovom vremenu komunikacija visoka tehnologija je omogućila prenos svih energetskih oblika. Od onih jednostavnih, dostupnih pojedincu, do onih globalnih, kojima se manifestuje sveopšta pripadnost ljudskoj zajednici. U tom ogromnom sazvežđu satkanom od bezbroj kablova koji prenose energiju i informacije, koje se zatim očitavaju na ekranima različitih uređaja, ogleda se univerzalni planetarni proces koji vreme i prostor oko nas definiše kao komunikološki trenutak. Biti u njemu jedan tren jeste civilizacijski standard, a razvijati ga životna privilegija.

Pre više od pola veka mi smo odlucili da budemo deo tog procesa. Razvijamo poslovni sistem i istovremeno ga prilagođavamo shodno globalnim procesima i ekonomskim mogućnostima, ali i geopolitičkim uslovljenostima. Pozitivno delovanje u tim prepoznatim okolnostima jeste preduslov svakog dobro osmišljenog akcionog plana. U njemu se uzimaju u obzir sva ograničenja, ali se navode i sve one prednosti koje su sagledane i potvrđene u godinama iza nas. Uvećani kapaciteti i evidentno proizvodno iskustvo uvek postavljaju kao izazov proširenje delovanja na druga tržišta. Ovaj makro ekonomski zahvat jeste ne samo zahtev vremena sada, već i definisanje poslovne strategije za vreme koje dolazi: sveobuhvatna internacionalizacija dovodi različite kompanije iz različitih sredina u jedinstveni prostor delovanja u kome postoje jedinstveni produkcionni, tehnološki i ekonomski standardi. Spremnost za taj trenutak jeste pokazatelj snage i prepoznatog naseg poslovnog opredeljenja.

In the era of communications, the high technology has enabled transmission of all forms of energy from the simple ones available to individuals to the global ones that define our belonging to the mankind. Inside that enormous constellation made from a number of cables transmitting the energy and information and then displayed on various devices, a universal planetary process is demonstrated which time and space around us define as communication moment. Being in that moment is a civilization standard and develop it is a lifetime privilege.

More than half a century ago we decided to be part of that process. We develop a business system adjusting it to global processes and financial capabilities, but also to geopolitical dependencies. Taking positive actions in the identified set of circumstances is a precondition to any well designed action plan. The action plan must take into consideration all the limitations identified and verified during the past years. Increased capacity and evident manufacturing experience always set expansion to other markets as a main challenge. This macroeconomic venture is not merely a request for the present moment, but also defining of business strategy for times to come. Global internationalization brings different companies from different backgrounds to a unique conjoint operating space which has unique production, technology and economic standards. Being ready for that moment is a sign of strength and recognized business orientation. Readiness for that moment is indicator of power and our company management.

ISTORIJAT KODAR GRUPE



Telekomunikaciona kompanija pod imenom Kodar osnovana je 1989. godine. Na početku je kompanija bila specijalizovana za obavljanje poslova na velikim visinama. Sa razvojem mobilnih telekomunikacija raste potreba za podizanjem i instalacijom antenskih stubova kao i kompletnim rešenjima za mobilnu telefoniju te za kratko vreme postaje lider u tom segmentu poslovanja. Sve do 2000. godine Kodar deluje samo na trzistu Srbije da bi te godine poceo operacije i u Crnoj Gori. Tokom narednih godina jacajuci odnose i konekcije sa Telekom Srbije kao i Telenorom kompanija siri oblasti delovanja i postaje nezamenljiv partner svim mobilnim operaterima u Srbiji i Crnoj Gori i zajedno sa njima radi na izgradnji i jacanju njihove mobilne mreze. Pocetkom 2011. godine Kodar dobija poslove i na trzistima Bosne i Hercegovine, Madjarske i Makedonije. Iste godine Kodar kupuje Energomontazu, jednu od najvećih istocnoevropskih kompanija iz oblasti projektovanja i izvođenja radova na energetskim i telekomunikacionim objektima.

Energomontaza (danas clanica Kodar grupacije) osnovana je davne 1958. godine. U vreme osnivanja, 38 zaposlenih radilo je na poslovima postavljanja elektro i telefonske mreže da bi danas kompanija imala preko 600 zaposlenih. Uspešno poslovanje kao i proširenje tržišta napravili su moderan sistem koji se bavi izgradnjom dalekovoda, trafostanica, telekomunikacionih objekata kao i proizvodnjom metalne opreme. Razvijena je sopstvena

projektantska mreža što omogućava pristup referentnim projektima visokog nivoa. Pre svega to su najveći infrastrukturni poslovi od nacionalnog značaja za države gde su radjeni. Nasi klijenti su bili : Poste, Telekom, Policija, Vojska Osim toga, Energomontaza je uspešno realizovala veliki broj energetskih i telekomunikacionih sistema u okviru železničke, putne i prenosne mreže, kao i velike energetske kapacitete - industrijske objekte, bolnice, škole i stambene zgrade.

Dosadašnji rezultati su, pored visokoprofesionalnog odnosa prema ugovorenim obavezama, postignuti i politikom firme da konstantno i bezrezervno radi na unapređenju kadrovske strukture, opreme i alata, mašinskog i voznog parka. Na svom razvojnog putu, šireći spektar aktivnosti najvišeg kvaliteta i standarda Kodar Grupa je izrasla u modernu kompaniju koja se specijalizovala za izvođenje ugovora po sistemu „ključ u ruke“ u mnogim oblastima.

Prepoznata kao vrhunska kompanija dobijala je poslove u Rusiji, Iraku, Nigeriji, Togou, Panami, Gvineji, Istocnoj Evropi.....

Kvalitet usluga proizvoda, delovanje svih pratećih službi kao i precizni je definisanje delovanja svih učesnika u procesu rada, osigurava se prema standardu ISO 14001 and ISO 18001. Uvođenje ovog standarda dovelo je do povećanja efikasnosti i uspešnosti poslovanja, kao i do ostvarenja našeg krajnjeg cilja – dobijanja odlične ocene našeg rada od strane poslovnih partnera.

Iako danas Kodar Grupa, sa svim svojim clanicama, ima preko 1000. zaposlenih, koji se sada suočavaju za novim izazovima, ideja da svojim korisnicima budemo **“PARTNER ZA CEO ŽIVOT”** nije se promenila.

HISTORY OF KODAR GROUP



Since its foundation, company's activities have included project designing and construction of power and telecommunication objects. The company is a reliable and a trustworthy partner which has been proved by many successfully completed projects in the past 50 years. Previous results have been achieved, not only because of the highly professional relationship toward the contractual obligations, but also because of the company policy which is to continuously and unconditionally improve and modernize the staff structure, equipment, tools, machinery and vehicles. During its development, by expanding the scope of activities of the highest quality and standards, "Kodar Group" has grown into a modern company specialized in realization of contracts with the 'turnkey' system in various segments

Well known as highly professional company, Kodar Group has also implemented projects abroad. Extensive work has been done in Russia, Iraq, Nigeria, Togo, Panama, Guinea, Eastern Europe.....

The quality of our services and products, logistics and more strictly defined actions of all work participants, is ensured according to ISO 14001 and ISO 18001 standard. This led to the significant increase of business efficiency and productivity, as well as the achieving of our ultimate goal – getting excellent reviews of our work by our business partners.

Although today Kodar Group has 12 companies with more than 1000 employees with new and different challenges our initial idea of **“PARTNER FOR A LIFETIME”** has not change.



The company Kodar has been founded in 1989 in southwest of Serbia. At the beginning company was specialized for high-altitude works. Soon the era of fast growing telecommunication business came and Kodar started with installments of antenna pillars, as well as overall mobile telephony solutions. In a very short period of time Kodar became a leader in that segment.

In year 2000. Kodar start operations in Montenegro, beside already fully covered Serbian one.

Soon after that, years of the fastest growth has begun and we decided to start widening the scope of telecommunication services offered to the market. Strengthening the position in Telekom Serbia and Telenor, Kodar became unavoidable partner of all mobile operators in Serbia and Montenegro. At 2011. company won various tenders in Bosnia&Hercegovina, Hungary and Macedonia and became real regional player.

In the same year Kodar made its first acquisition. One of the biggest regional company from the field of energetics Energomontaza became a member of Kodar Group.

Energomontaza has been founded in 1958. and at the time of founding, 38 employees were installing electrical and telephone networks. Today 600 employees successfully running a modern company which is active in several segments: constructing overhead transmission lines, transformer stations, telecommunication facilities, and production of metal equipment.

We developed our own project designing office, increased number of employees and thus ensured access to high level reference projects. Mostly of them were projects of national importance for the countries where its happened. Our clients were and still are: Post, Telekom Serbia, Police, Army. Apart from this, "Energomontaza" has successfully realized a number of power and communication systems within the railroad, road and transmission networks. For the purpose of local development, a number of large-scale projects have been realized including industrial objects, hospitals, schools and residential buildings.

delatnosti

IZGRADNJA, ODRŽAVANJE I REMONT Dalekovodi

- Elektroenergetski objekti od 0,4 do 400 kV;
- Vazdušni i podzemni kablovi do 110 kV;
- Žičare i ski-liftovi;
- Antenski i reflektorski stubovi i stubovi mobilne telefonije;
- Razvlačenje i ugradnja AVG provodnika;
- Ugradnja OPGW užeta.

Trafostanice, razvodna postrojenja i javna rasveta

- Izgradnja i remont razvodnih postrojenja do 400kV;
- Izgradnja i remont razvodnih postrojenja za železnicu 110/25kV;
- Izgradnja i remont trafostanica do 220kV;
- Elektrifikacija železničkih pruga i tramvajske kontaktne mreže;
- Javna i reflektorska rasveta ulica, sportskih i industrijskih objekata;
- Elektroinstalacije i motorni razvodi u stambeno-poslovnim objektima;
- Izgradnja baznih stanica mobilne telefonije.

Planiranje, projektovanje, inženjering, instalacija i održavanje telekomunikacionih sistema i opreme

- Klasične telekomunikacione mreže;
- Širokopojasne koaksijalne mreže;
- Optičke transportne mreže;
- Integrisane telefonske i računarske mreže;
- Protivpožarni sistemi;
- Sistemi internog i spoljašnjeg video nadzora;
- Izgradnja baznih stanica mobilne telefonije.
- Bežične komunikacije;
- Informacione tehnologije;
- Radio-navigacioni sistemi;
- Radio-relejni sistemi;
- RNPO & DT;
- Mikrotalasne veze;
- Gromobranski sistemi;
- Protivprovalni sistemi.

Mobilna telefonija

- Akvizicija i zakonske procedure
- Izgradnja, projektovanje i instalacija
- Pustanje u rad i održavanje Core, BTS, RR i antenskih sistema
- Planiranje radio mreža
- Optimizacija mreža
- Izgradnja baznih stanica mobilne telefonije

PROIZVODNJA

- Opreme za elektroenergetska postrojenja;
- Čelično-rešetkasti i reflektorski stubovi;
- Čelični antenski stubovi različitih oblika i visina;
- Preklopni železnički, semaforški i stubovi javne rasvete;
- Različiti tipovi limenih razvodnih ormana i dr;
- Opreme za telekomunikaciona postrojenja;
- Konstrukcija za kontaktne vodove železnice;
- Metalne konstrukcije i bravarski proizvodi za građevinarstvo;
- Sušare na čvrsto gorivo (za voće, povrće i lekovito bilje);
- Proizvodi za kooperaciju.

PROJEKTOVANJE

- Razvodna postrojenja do 400kW i razvodna postrojenja za železnicu 110/25kV;
- Trafostanice do 220kV;
- Javne i reflektorske rasvete ulica, sportskih i industrijskih objekata;
- Elektroinstalacije u fabričkim halama;
- Instalacije stambeno-poslovnih objekata;
- Bazne stanice mobilne telefonije;
- Klasične telekomunikacione, optičke i širokopojasne koaksijalne mreže;
- Elektroenergetski objekti od 0.4 do 400 kV;
- Vazdušni i podzemni kablovi do 110 kV;
- Antenski i reflektorski stubovi i stubovi mobilne telefonije.

scope

CONSTRUCTION, MAINTENANCE AND REHABILITATION Overhead transmission lines

- Electric power plants from 0.4 to 1000kV;
- Over- and underground cables up to 110kV;
- Cable cars and ski lifts;
- Antenna and reflector poles and mobile telephony poles;
- Laying and installing of AVG conductors;
- Installing of OPGW.

Power transformer stations, distribution plants and public lighting

- Construction and rehabilitation of distribution plants up to 400kV;
- Construction and rehabilitation of railroad distribution plants 110/25kV;
- Construction and rehabilitation of power transformer stations up to 220kV;
- Construction of power supply network for railroad and trams;
- Public and reflector lighting of streets, sport and industrial facilities;
- Installation of automation and control systems in residential and office buildings;
- Construction of mobile telephony base stations.

Specialized for planning, designing, engineering, installation and maintenance of telecommunication systems and equipment

- Classic telecommunication networks;
- Broadband coaxial networks;
- Optical transport networks;
- Integrated telephone and computer networks;
- Fire safety systems;
- Internal and external video surveillance systems;
- Construction of mobile telephony base stations.

- Wireless communication;
- Information technologies;
- Radio-navigation systems;
- Radio-relay systems ;
- RNPO & DT;
- Microwave Links;
- Supply systems;
- Lightning-conduct systems;
- Anti-burglary protection;

Mobile telephony

- Acquisition & Legal Procedures
- Construction, Design & Installation
- Commissioning and Maintenance of Core, BTS, RR, Antenna Systems
- Radio network planning
- Network optimization
- Construction of mobile telephony base stations

PRODUCTION

- Electric power plants equipment;
- Lattice steel and reflector poles;
- Antenna steel poles of various shapes and sizes;
- Joint railroad, traffic light and public lighting poles;
- Various types of tin plate distribution boxes, etc;
- Telecommunication plants equipment;
- Constructions for railroad power supply network;
- Metal constructions and locksmith products for building;
- Special objects for drying of fruit, vegetables and herbs, running on solid fuel;
- Products for cooperation.

PROJECT DESIGNING

- Distribution plants up to 400kW and railroad distribution plants 110/25kV;
- Power transformer stations up to 220kV;
- Public and reflector lighting of streets, sport and industrial facilities;
- Electric installations in industrial plant halls;
- Installation in residential and office buildings;
- Mobile telephony base stations;
- Classic telecommunications, optical and broadband coaxial networks;
- Electric power facilities from 0.4 to 1000 kV;
- Over and under ground cables up to 110 kV;
- Antenna and reflector poles and mobile telephony poles.

MISIJA

Naša misija je da svojom kompletnom ponudom visoko kvalitetnih usluga u oblasti izgradnje elektroenergetskih i telekomunikacionih objekata uvek budemo na usluzi klijentima. Oslanjamo se na visoku profesionalnost zaposlenih i njihovu privrženosti stalnom podizanju nivoa kvaliteta proizvoda i usluga.

VIZIJA

Postali smo vodeća kompanija za održavanje i izgradnju elektro-energetskih i telekomunikacionih objekata u Srbiji, sa stalnim delovanjem i na drugim tržištima. Stalno učenje i usvajanje novih znanja, poznavanje lokalnog i regionalnog tržišta i izgradnja partnerskih odnosa sa klijentima omogućava nam dalji rast i razvoj.

STRATEŠKI CILJEVI

- Potvrda i očuvanje velikog ugleda u izgradnji i održavanju elektro-energetskih i telekomunikacionih objekata na domaćem tržištu.
- Povećanje obima poslovanja na domaćem i tržištu u okruženju: Bosni i Hercegovini, Crnoj Gori, Makedoniji, Bugarskoj i Rumuniji.
- Proširenje poslova na nova tržišta Evrope i Afrike: Libija, Tunis, Maroko, Nigerija...
- Stalni razvoj proizvoda, usluga i programa rada.
- Stalni razvoj i modernizacija opreme.
- Postizanje visokog standarda radnog prostora i uslova rada.
- Širenje i poboljšavanje informacionih sistema.
- Stalno unapređenje sistema kvaliteta.
- Stimulativnom politikom i nagrađivanjem omogućiti zadovoljenje ličnih i profesionalnih potreba zaposlenih.
- Stalnim usavršavanjem i strateškim planiranjem kadrova omogućiti ostvarivanje poslovnih ciljeva i zadovoljenje zahteva tržišta.



MISSION

Our mission is to always be at service to our customers with the variety of high quality services in the fields of construction of electric power facilities and telecommunication facilities. We rely on our employees’ professionalism and their dedication to constant increase in product and service quality.

VISION

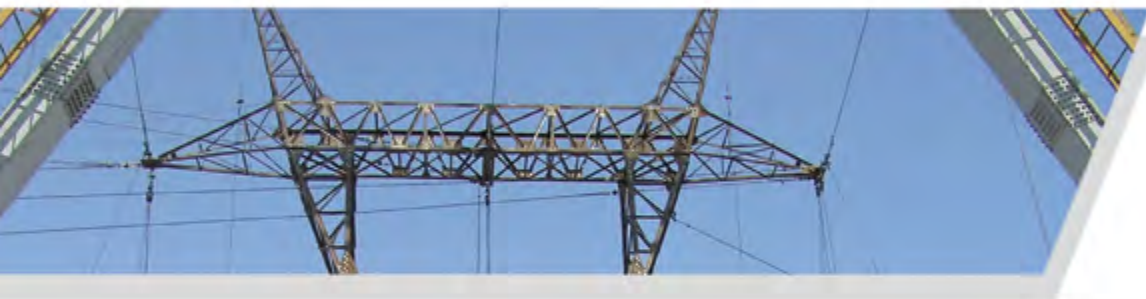
We have become the leading company for construction and maintenance of electric power facilities and telecommunication facilities in Serbia, with many projects in other markets. Continuous learning and adoption of new technologies, familiarity with the situation in the local and regional markets and building partner relations with clients those are the key components which ensure our further growth and development.

STRATEGIC GOALS

- To confirm and maintain the good reputation in the fields of construction and maintenance of electric power facilities and telecommunication facilities in the domestic market.
- To increase the business scope in the local and regional markets: Bosnia and Herzegovina, Monte Negro, Macedonia, Bulgaria and Romania.
- Expand our business to new markets of Europe and Africa: Libya, Tunisia, Morocco, Nigeria...
- Continuous product, services and working program development.
- Continuous development and equipment modernization.
- Meeting the working environment and working conditions high standards.
- Information system expansion and improvement.
- Allow fulfillment of personal and professional goals of the employees with stimulating and reward policies.
- Enable fulfillment of the business goals and market requirements by continuous improvement and strategic planning of staff.

DALEKOVODI

TRAFOSTANICE TELEKOMUNIKACIJE METALNE KONSTRUKCIJE I OPREMA



OVERHEAD TRANSMISSION AND DISTRIBUTION LINES

Izgradnja dalekovoda predstavlja jedan od tehnički najsloženijih poslova iz delatnosti našeg preduzeća. Ova delatnost zahteva stručno osposobljeno osoblje kao i najsavremeniju opremu i mehanizaciju. Prilikom izvođenja radova mora se voditi računa o strogim kriterijumima zaštite na radu i zaštite životne sredine. U toku svog višedecenijskog rada Energomontaža je izrasla u vodeće preduzeće za projektovanje, izgradnju i nadzor energetskih postrojenja od 0.4 do 400 kV na području Srbije. Tokom svog postojanja izgradila je kilometre i kilometre 0.4, 10, 35, 110, 220 i 400 KV dalekovoda svih tipova i to po sistemu „ključ u ruke“.

Naš tim sačinjavaju iskusni i provereni inženjerski i tehnički kadrovi, kvalitetni električari, zavarivači, bravari i drugi proizvodni radnici koji predstavljaju pouzdanog partnera spremnog za mnogobrojne izazove sve zahtevnijeg tržišta. Posedujemo veoma kvalitetnu opremu i mehanizaciju za montažu i podizanje čelično-rešetkastih stubova svih tipova i napona kao i razvlačenje i ugradnju provodnika, AVG i OPGW uzeta sa strogo kontrolisanom zateznom silom. Specijalna oprema i iskusne stručne ekipe omogućavaju izvođenje radova u svim vremenskim uslovima i na svim terenima.

Overhead transmission lines construction is technically one of the most complex activities performed by our company. This activity requires skilled staff and up-to-date equipment and mechanization. During these operations, highest work safety and environmental protection criteria must be met.

Over the decades Energomontaza has become the leading company for project designing, construction and maintenance of power plants from 0.4 up to 400 kV in Serbia. During its existence, Energomontaza has constructed miles and miles of 0.4, 10, 35, 110, 220 and 400 KV of all types of overhead transmission lines, with the 'turnkey' policy.

Our team is comprised of experienced and renewed engineers and technical staff, high quality wiremen, welders, fitters and other types of production workers, which create a reliable partner, ready to keep up with all the demanding market requirements. We own a high quality equipment and mechanization for installation and erection of steel structures of all types and voltages, as well laying and installing of conductors, AVG and OPGW with strictly controlled tensile strength. Special equipment and experienced, skilled staff ensure work to be carried out in all weather conditions and all types of terrain.



DALEKOVODI



Energomontaža je među prvi kompanijama u regionu koje su započele sa ugradnjom OPGW užeta po dalekovodima svih napona i zato smo danas na teritoriji Srbije vodeća kompanija za ugradnju, ispitivanje i povezivanje (splajsovanje) OPGW užeta. Radna jedinica „Dalekovod“ montirala je i izradila kompletnu konstrukciju (portal, spratna konstrukcija) na trafostanicama TS 400 KV Sremska Mitrovica, TS 400 KV Sombor i TS 400 KV Jagodina. Proizvodnju i isporuku metalne konstrukcije uglavnom izrađujemo u našem metalnom pogonu u Prijepolju, kako za dalekovode tako i za sve vrste trafostanica.

Dragocena iskustva su sticana i prilikom izvođenja radova na lokacijama van granica Srbije, u regionu i svetu i to: u Republici Srpskoj DV 110 KV, OPGW u Nigeriji, DV 33 KV-100 KV u Togou, osvetljenje luke Relin u Rusiji itd.

Bavimo se i:

- izradom i montažom: konstrukcije antenskih stubova (po vlastitom projektu kao i projektu drugih projektantskih kuća), reflektorskih stubova, stubova mobilne telefonije;
- izradom i montažom ramovskih sistema za hale i magacinske prostore svih dimenzija;
- Izgradnjom žičara i ski-liftova;
- montažnim radovima na izradi i ugradnji podzemnih kablova do 110 KV.

OVERHEAD TRANSMISSION AND DISTRIBUTION LINES

Energomontaza was one of the first companies in the region to begin installing the OPGW in overhead transmission lines of all voltages, and that is the reason why we are the leading company for installing, testing and connecting of OPGW.

Working unit "Dalekovodi" has installed and made a complete construction (portal, floor construction) on the power transformer stations TS 400 KV, TS 400 KV Sremska Mitrovica, TS 400 KV Sombor and TS 400 KV Jagodina. Manufacturing and delivery of metal constructions is mostly carried out in our metal plant in Prijepolje, for overhead transmission lines as well as for all types of power transformer stations.

We gained precious experience during our projects outside of Serbia, in the region and in the world: Republika Srpska DV 110 KV, OPGW in Nigeria, DV 33 KV-100 KV in Togo, lighting of the Relin arc in Russia, etc.

Our scope of activities also includes:

- Construction and installation: antenna poles construction (by our own project, or by the project of another company), reflector poles, mobile telephony poles;
- Construction and installation of industrial plant halls (casing system), all dimensions of storages;
- Construction of cable cars and ski-lifts;
- Installation work in constructing and installing of underground cables up to 110 KV.





DALEKOVODI
TRAFOSTANICE
TELEKOMUNIKACIJE
METALNE KONSTRUKCIJE I OPREMA



**POWER
TRANSFORMER STATIONS**



TRAFOSTANICE

Glavne aktivnosti vezane za ovaj deo našeg poslovanja su:

- projektovanje, izgradnja i remont razvodnih postrojenja do 400kW;
- projektovanje, izgradnja i remont razvodnih postrojenja za železnicu 110/25kV;
- projektovanje, izgradnja i remont trafostanica do 220kV;
- elektrifikacija novih železničkih pruga i zamena opreme pri održavanju postojeće kontaktne mreže;
- javna i reflektorska rasveta ulica, sportskih i industrijskih objekata;
- elektroinstalacije i motorni razvodi u fabričkim halama;
- instalacije stambeno-poslovnih objekata (energetski deo i strukturne mreže);
- gromobranska zaštita svih vrsta objekata;
- bazne stanice mobilne telefonije.



Osim proizvodnje rasvetnih i reflektorskih stubova Energomontaža nudi svoje usluge i na projektovanju javne rasvete, isporuci opreme, izvođenju celokupnih radova, odnosno, inženjeringa za rasvetu svih vrsta građevinskih objekata.

U našem projektom birou izrađuje se dokumentacija potrebna za izgradnju i rekonstrukciju poslovnih, industrijskih i stambenih objekata. Mladi stručnjaci u saradnji sa iskusnim projektantima, koji imaju bogate reference u projektovanju velikih objekata, vešto uklapaju nove ideje sa strogim zahtevima investitora.

Stručnost naših zaposlenih, dugogodišnje iskustvo i savremena oprema koju posedujemo omogućavaju nam da usvakom trenutku budemo u stanju da realizujemo veći broj različitih projekata, bez obzira na vremenske uslove i vrstu terena.



POWER TRANSFORMER STATIONS

Our main activities regarding the power transformer stations are:

- Project designing, construction and rehabilitation of distribution plants up to 400kV;
- Project designing, construction and rehabilitation of distribution plants for railroads up to 110/25kV;
- Project designing, construction and rehabilitation of power transformer stations up to 220kV ;
- Construction of power supply network for the new railroads and replacement of equipment while performing maintenance of the existing railroad power supply network;
- Public and reflector lighting, lighting for sport and industrial facilities;
- Installation of automation & control systems for industry;
- Installations in residential and business facilities (energy and structural network);
- Lightning protection rods for all types of facilities;
- Base stations for mobile telephony.



Apart from lighting and reflector poles production, Energomontaza offers its services in the fields of public lighting project designing, equipment delivery and entire work regarding the engineering of lighting (all types of facilities).

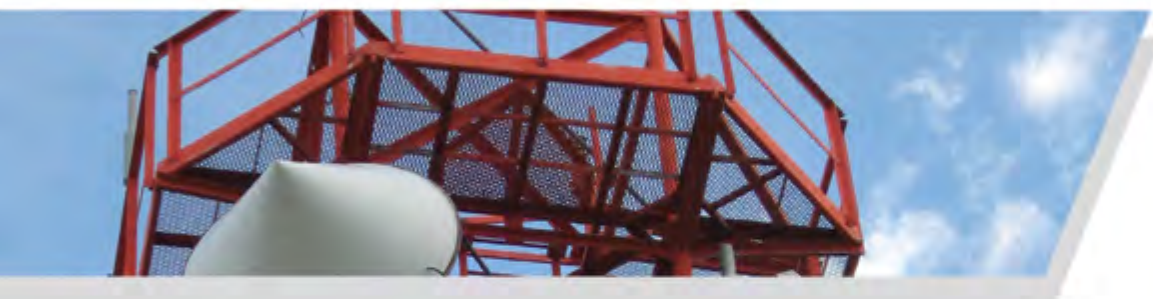
Our Project office creates the required documentation for building and reconstruction of business, industrial and residential buildings. Young experts, in cooperation with experienced designers highly referenced regarding the grand building project designing, comprise new ideas with investor's strict requirements.

Our employees' expertise, years of experience and modern equipment enable us at every moment to realize a number of different projects regardless of the weather conditions or type of terrain.

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TELECOMMUNICATION NETWORKS



Kodar Grupa se bavi telekomunikacijama više od 35 godina i renomirano je ime na tržištu telekomunikacija Srbije, ostalih republika bivše Jugoslavije kao i na tržištu Centralne i Istočne Evrope. Rad je organizovan savremeno i optimalno je prilagođen zahtevima tržišta i ekonomskom ambijentu. U delu Telekomunikacija imamo više od 500 radnika: visoko obrazovan stručni kadar i visoko kvalifikovane proizvodne radnike. Posebna pažnja posvećena je neprekidnom usavršavanju stručnog kadra i redovnom obnavljanju tehničkih sredstava kao osnovi tržišne konkurentnosti.

U stručnom timu postoji duboka svest o tehnološkoj ekspanziji u oblasti telekomunikacija. Zato se, pored redovne delatnosti, radi na stalnom usvajanju novih tehnologija u komunikacijama, od kojih mnoge još uvek nisu zaživele na ovom tržištu. Biti korak ispred, to je moto naše strategije u opstajanju i zauzimanju jedne od vodećih pozicija na tržištu komunikacija u Srbiji i regionu.



Kodar Group is engaged in telecommunication business for over 35 years and is a renowned name in the market of telecommunications of Serbia, other former Yugoslav republics and in Central and Eastern Europe. It is modern, well organized, and perfectly adjusted to the present market requirements and economic conditions. Telecommunication part of company employs over 500 highly educated, skilled staff and highly qualified production workers. Special attention is paid to continuous education of the expert staff and a regular modernization of technical assets which is a baseline of market competitiveness. The expert team has a strong sense of awareness of technological expansion in the field of telecommunications. Thus, apart from our regular activities, we work on continuous adoption of new technologies in communications many of which are yet to be introduced to our market. Being one step ahead is the motto of our survival strategy, as well as claiming one of the leading positions in the communications market of Serbia and the region.



Prvobitne delatnosti, projektovanje i izgradnja klasičnih TT mreža, danas su prerasle u projektovanje i izgradnju pristupnih, transportnih i korporacijskih mreža, kao i ključ u ruke u oblasti mobilnih i fiksnih komunikacija što podrazumeva akviziciju, zakonsku regulativu, projektovanje, izgradnju, instalaciju i održavanje opreme u mobilnoj i fiksnoj telefoniji. Danas, mi realizujemo najsloženije poduhvate u oblasti telekomunikacija: od idejnog projekta, glavnog projekta, izgradnje, izrade dokumentacije izvedenog stanja, pa sve do uslužnog održavanja izgrađenog objekta u toku eksploatacije. Posebna oblast naše delatnosti je primena savremene merne tehnologije i dijagnostike u detektovanju i otklanjanju kvarova na sistemima u eksploataciji. U oblasti pristupnih mreža sposobni smo da realizujemo sve kablovske pristupne mreže od rezidencije korisnika do čvornog uređaja. Pored kablova, realizacija podrazumeva montažu svih pasivnih i aktivnih uređaja u stanu korisnika ili specifikiranom objektu i izgradnju prateće kablovske infrastrukture u ruralnim i urbanim sredinama kao što je npr. kablovska kanalizacija. U oblasti mobilnih mreža smo apsolutni lideri u projektima SWAPa tj. renovacije mreža mobilnih operatera.

The original activities, project designing and classic TT networks constructions, have grown over the years into project designing and construction of access, transport and corporation networks as well as turn-key solutions in the field of mobile and fixed communications including acquisition, legislation, design, construction, installation and maintenance of mobile and fixed telephony equipment. Today we realize the most complex ventures in the field of telecommunications: from the preliminary project, main project, construction, creation of "as is constructed" documentation, to the service of maintenance of building during exploitation. Special field of our expertise is application of modern measuring technology and diagnostics regarding detection and repairing of malfunctions of the exploited systems. In the field of access networks, we are capable of realizing all cable access networks from the user's residence to the optical node. Apart from the cables, realization includes installation of all passive and active devices in the user's apartment or a specified building and the installation of the supporting cable infrastructure in both rural and urban environments, for instance cable canalization. In the field of mobile networks we have an excellent knowledge in SWAP projects, renovation of mobile network operators.



Projektujemo i gradimo:

1) Klasične TT mreže (višeparičnim bakarnim kablovima): od rezidencije korisnika do višeservisnog pristupnog čvora (MSAN). Na novoizgrađenim i postojećim mrežama vršimo tzv. kvalifikaciju parica za primenu xDSL tehnologije pristupa. Pored pomenutog čvornog uređaja, imamo bogato iskustvo u primeni i montaži DSL multipleksera (DSLAM) i potrebno znanje za primenu najsavremenijih čvornih uređaja sa potpunim skupom usluga (FSAN), koji se nažalost još uvek ne primenjuju u našoj zemlji.

2) Širokopojasne koaksijalne mreže (pristupna mreža HFC tehnologije): od utičnice u stanu korisnika do tzv. optičkog čvora (optical node). Ova pristupna mreža deo je širokopojasnog dvosmernog sistema poznatog kao KDS (popularno poznat i kao 'kablovska televizija'). U ovoj oblasti kablogradnje imamo decenijsko iskustvo koje nije ograničeno samo na pristupni deo. Pioniri smo uvođenja ove tehnologije na srpsko tržište. Imamo značajne reference u projektovanju prijemnih antenskih sistema i glavnih stanica (headend) kao vitalnih delova KDS-a.

3) Korporacijske mreže (strukturne kablovske sisteme) poslovnih zgrada na bazi bakarnih i optičkih kablova. U okviru ove delatnosti projektuju se i izvode integrisane telefonske i računarske mreže, protivpožarni sistemi, sistemi internog i spoljašnjeg video nadzora.

4) Optičke transportne mreže. Od polaganja prvih optičkih kablova do danas u našim listama referenci vidi se period od dvadeset godina iskustva i rada. Optičke kablove polagali smo podzemno, nadzemno po dalekovodima i podvodno po dnu reka i jezera. Poslednjih deset godina projektujemo i montiramo optičke sisteme prenosa koncipirane na talasnom multiplexu (CWDM, DWDM) i pripadajućoj aktivnoj i pasivnoj opremi.

5) Mreže mobilnih operatera. Kodar grupa je u ovoj oblasti apsolutni lider na tržištu Centralne i Istočne Evrope i dugogodišnji partner vodećih operatera i proizviđača opreme kao Telekom Srbija, Telenor, VIP Mobile, T Mobile, Ericsson, Huawei, ZTE, NSN, NEC, Intracom, Marconi.

U saradnji sa ostalim radnim jedinicama naše kompanije izvodimo radove na projektovanju i pripremi lokacija baznih stanica mobilne telefonije, adaptaciji antenskih stubova i antenskih nosača, montaži i usmeravanju antenskih sistema, montaži antenskih kablova i opreme baznih stanica i integraciji u sistem mobilne telefonije. U ovom trenutku Kodar Grupa je deo svih projekata renovacije tj. zamene opreme sa posebnim akcentom na tzv. Value Added Services kao Radio optimizacija, Drive testovi, OMC i sl.





We design and construct:

1) Classic TT networks (multi wire copper cables) from the user's residence to the MSAN. For the newly constructed or already existing networks, we perform copper pairs classification for the xDSL access technology application. Apart from the mentioned optical node, we have years of experience in installing and applying DSL multiplexers (DSLAM) and we have the knowledge needed to apply the most up-to-date optical nodes with the full range of services (FSAN), which, unfortunately, are still not introduced in our country.

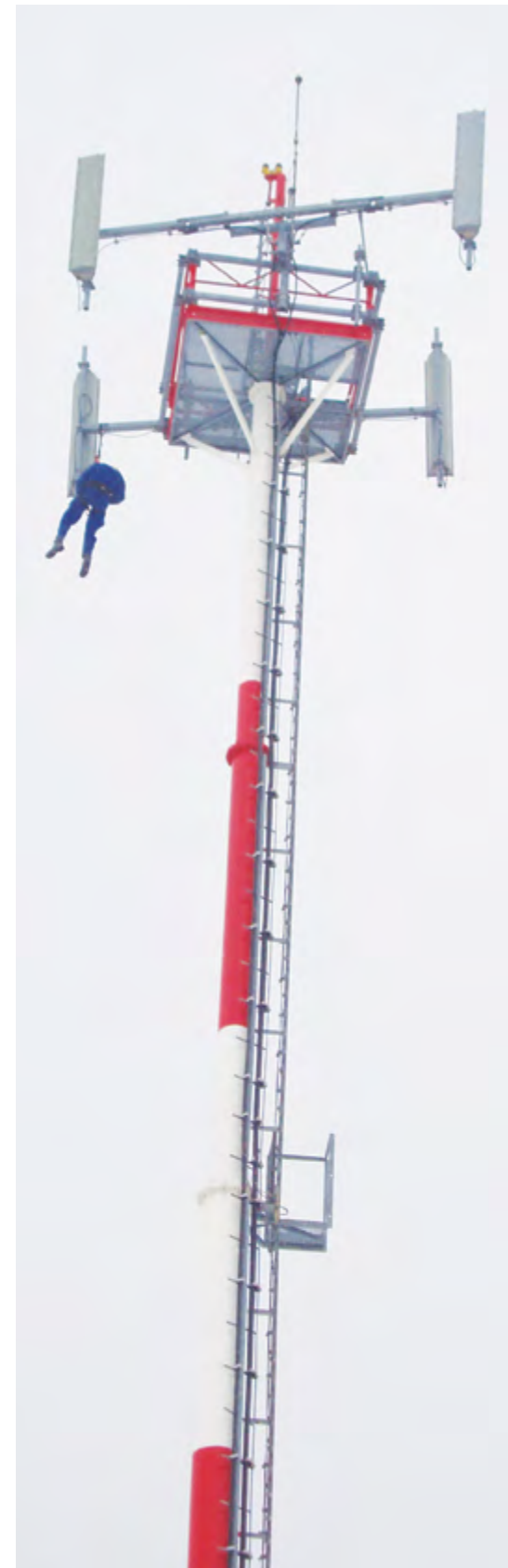
2) Broadband coaxial networks (HFC technology access network) from the plug in the user's apartment to the optical node. This access network is a part of a broadband two-way system known as CDS (Cable Distribution System, or just cable TV). In this field, our 10 years long experience is not limited only to the access part. We introduced this technology to the Serbian market. We've gained important references for project designing of antenna receiving systems and head ends as vital parts of CDS.

3) Corporate networks (structural cable systems) of the business buildings, based on the copper and optical cables. Within this activity, integrated phone and computer networks, fire safety systems and internal and external video surveillance systems are designed and installed.

4) Optical Transport Networks. From the first optical cable installation to this day, our reference lists present a period of 20 years of work and experience. Optical cables have been laid underground, above ground in the overhead transmission lines, and under water at the river and lake bottoms. In the last decade, we've been project designing and constructing optical transmission systems, based on the wave multiplex (CWDM, DWDM) and the belonging active and passive equipment.

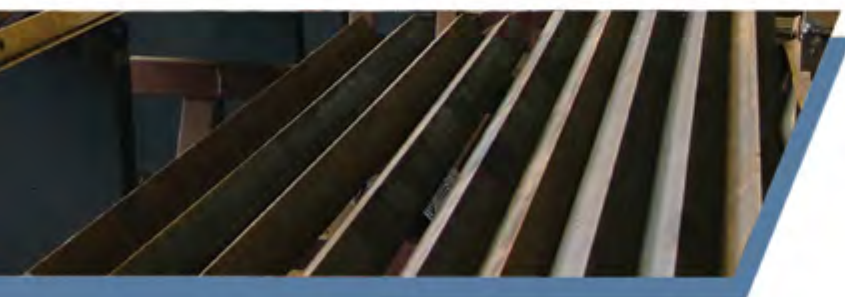
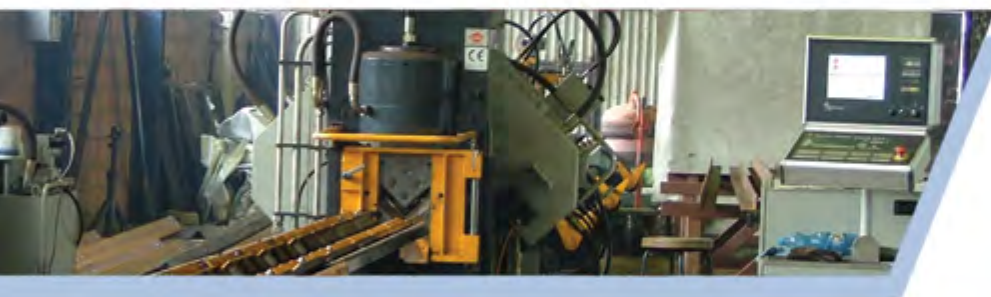
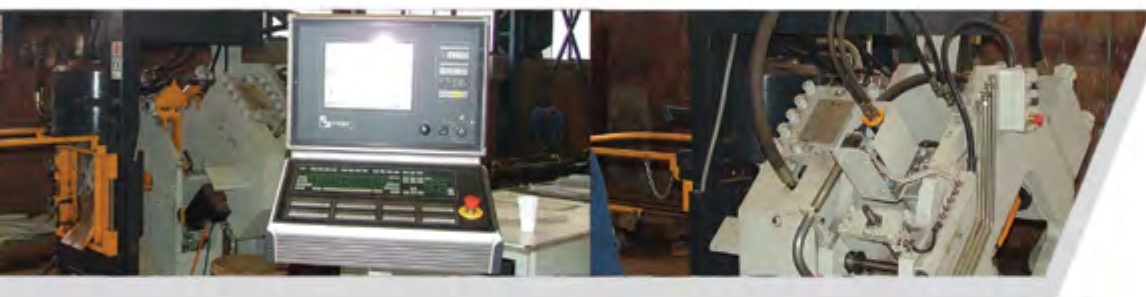
5) Network of mobile operators. In this field of telecommunications Kodar groups is an absolute market leader in Central and Eastern Europe and longterm partner of leading operators and equipment producers: Serbian Telekom, Telenor, VIP Mobile, T Mobile, Ericsson, Huawei, ZTE, NSN, NEC, Intracom, Marconi.

Together with other working units of our company we perform project designing and preparation of locations for mobile telephony base stations, antenna poles and supports, antenna systems installation and testing, antenna cables and base station equipment installation, as well as integration into the mobile telephony system. At this point Kodar Group is part of all regional renovation project, replacement of equipment with special emphasis on the so-called Value Added Services like Radio optimization, drive test, OMC etc.



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METAL CONSTRUCTIONS

Energomontaža je razvila industrijsku proizvodnju metalnih konstrukcija i opreme raznih namena. Nabavkom najsavremenije opreme za preradu profila i limova u mogućnosti smo da ispunimo sve zahteve kupca u pogledu kvaliteta, količine i rokova, bilo da se radi o malim ili velikim serijama.

Koristeći savremenu opremu i vodeći računa o standardima kvaliteta, zaštititi na radu i zaštititi životne sredine, uvek uspevamo da ostvarimo svoj cilj: završimo posao u skladu sa planovima i postignemo najbolji mogući rezultat. Metalne konstrukcije i oprema predstavljaju važan segment ukupne delatnosti naše kompanije, a bave se proizvodnjom:

- opreme za elektroenergetska postrojenja (portalna i aparatna konstrukcija za trafostanice od "L" i "U" profila i bešavnih cevi);
- čelično rešetkastih stubova (za 10, 35, 110, 220 i 400 kV);
- reflektorskih rešetkastih stubova visine do 30 m;
- čeličnih antenskih stubova različitih oblika i visina namenjenih za nošenje antenskih sistema radija, televizije i mobilne telefonije;
- preklopnih železničkih stubova;
- semaforskih stubova;
- stubova javne rasvete od okruglih cevi visine do 16 m sa direktnim ukopavanjem u temelj ili sa anker pločom i ankerima;
- osmougaonih stubova za javnu rasvetu visine do 16 m;
- različitih tipova limenih razvodnih ormana i dr.;
- opreme za telekomunikaciona postrojenja (proizvodi linijske TT opreme, PSK opreme, sve vrste ormana za TT mreže, sve vrste zateznih zavrtnjeva i dr.);
- konstrukcija za kontaktne vodove železnice (konstrukcije staničnih portala, stubovi za kontaktne vodove i stubovi za signalizaciju);
- metalnih konstrukcija i bravarskih proizvoda za građevinarstvo (čelične konstrukcije za građevinske objekte, mostove, nadvožnjake, metalni kontejneri različitih tipova, oprema za kotlarnice, toplovode, podstanice i dr.);
- sušara na čvrsto gorivo (za voće, povrće i lekovito bilje);
- pijačnih tezgi;
- kontejnera za građevinski otpad;
- proizvoda za kooperante (prerada limova, presovanje u vrućem i hladnom stanju, površinska zaštita bojenjem i dr.).

"Energomontaža" has developed industrial production of metal constructions and equipment for different purposes. By obtaining the latest equipment for metal profiles and sheets processing, we are in the position to meet all the buyer's demands regarding quality, quantity and deadlines, regardless of the order size.

By using the latest equipment and complying with the quality standards, work safety and environment protection regulations, we've managed to achieve our goal: to complete the work in accordance with plans, and achieve the best result possible. Metal constructions and equipment represent an important part of an overall company's scope of activities, and it relates to manufacturing of:

- Equipment for electric power plants (portal and apparatus construction for power transformer stations from "L" and "U" profiles and seamless pipes);
- Lattice steel structures (for 10, 35, 110, 220 and 400 kV);
- Lattice reflector structures up to 30 m high;
- Various antenna steel structures for radio, television and mobile telephony antennas;
- Joint railroad poles;
- Traffic light poles;
- Public lighting poles made from round pipes up to 16 m high, with the direct digging into the foundation, and with anchors and anchor plate;
- Octagonal poles for public lighting up to 16 m high;
- Numerous types of tin plate distribution boxes, etc;
- Equipment for telecommunication plants (telephone line equipment, self supported line equipment, numerous types of distribution boxes, all types of screws, etc);
- Steel structures for railroad power supply network (railroad stations portals and gantries, contact network poles, poles for signalization);
- Metal constructions and locksmith products for building (steel constructions for buildings, bridges, overpasses, metal containers of various types, equipment for boilers, heating distribution lines, substations, etc.)
- Special objects for drying fruits, vegetables and herbs, running on solid fuel;
- Market stands;
- Construction waste containers;
- Products for co-operation (sheet metal processing, sheet pressing in hot and cold conditions, surface protection by paint, etc.)

PODRŠKA POSLOVNIM PROCESIMA

business process support

Neizostavni deo kompanija veličine Kodar Grupe su i službe podrške koje obezbeđuju da se osnovni posao obavlja valjano i na vreme. Kao rezultat širenja delatnosti i brzog razvoja, kompanija danas poseduje značajnu infrastrukturnu opremu. Tu pored ostalog spada i 150 vozila, 40 građevinskih mašina, desetine uređaja za ispitivanje i specijalnu namenu. Izdajamo:

- autobuse i kombinovana vozila za prevoz radnika i materijala;
- Teške i lake kamione
- autodizalice raznih nosivosti i visine dizanja, sa pogonom na sve točkove, za transport i do nepristupačnih terena;
- vozila za prevoz teških građevinskih mašina;
- tegljače sa prikolicama za prevoz kontejnera i ostalog materijala;
- posebna terenska vozila za teške terene;
- mikser-mešalice, vozila za prevoz gotovog betona sa pogonom na sve točkove (6x6), zapremine od 3 do 6 m³, za dovoz do nepristupačnih terena (prevoz se organizuje i izvršava kako za sopstvene potrebe, tako i uslužno trećim licima);
- male pokretne i mobilne kombinovane mašine za urbane uslove;
- velike građevinske mašine za iskopavanje i utovar;
- buldožere za izradu puteva;
- specijalne mašine za iskop rova za polaganje svih vrsta kablova u zemlju;
- uređaje za podbušivanje ispod pruga i puteva;
- kompresore za razbijanja betona i asfalta;
- kompresore za uduvavanje optičkih kablova kapaciteta do 13/min;
- vibronabijače različitih težina;
- mobilne agregate za proizvodnju električne energije do 380 v i snage do 25KW.

Kodar Group poseduje sopstvenu autoradionicu za popravku vozila u kojoj je moguć istovremeni rad na većem broju vozila. Takođe, raspolaze i sa pokretnom autoradionicom za brze intervenciju na terenu.



An essential parts of company size Kodar Group are support services because they provide that the basic work is done properly and on time. As a result of business expansion and rapid development, the company now has significant infrastructure equipment. There, among other things includes 150 vehicles, 40 construction machines and dozens of devices for testing and special purpose.

- Heavy and lite trucks
- Buses and combined vehicles for transportation of workers and materials;
- Various types of auto cranes, with four wheel drive, for transportation to inaccessible terrains;
- Vehicles for transportation of heavy construction machines;
- Truck tractors with trailers for transportation of containers and other materials;
- Special terrain vehicle for challenging terrains;
- Mixer trucks, vehicles for transportation of concrete with the all wheel drive (6x6), with 3 to 6 m³ volume, for transportation to inaccessible terrains (organized and carried out not just for company's needs, but also as a service to third parties);
- Small moveable and mobile combined machines for urban conditions;
- Large construction machines for digging and loading;
- Bulldozers for road construction;
- Special machines for digging of ditches for laying all types of cables into the ground;
- Devices for drilling under rails and roads;
- Compressors for breaking of concrete and asphalt;
- Compressors for insufflations of optical cables with the capacity up to 13m³/min;
- Vibratory hammers of different weights;
- Mobile aggregates for production of electricity up to 380 V, with strength up to 25 KW.

Kodar Group has its own car workshop for repairing of vehicles with the capacity for simultaneous repairs of several vehicles. Also have a mobile workshop for express field interventions.



sertifikati kvaliteta quality certificates

Rezultat naseg konstantnog ulaganja u razvoj ljudi, opreme i procesa rada su i sertifikati ISO 9001, ISO 14001 i ISO 18001 dobijeni poslednjih godina. Ovi sertifikati se odnose na projektovanje elektroenergetskih instalacija, projektovanje elektrokomunikacionih sistema, izvođenje elektroenergetskih instalacija, izgradnju dalekovoda i izvođenje radova na telekomunikacionim objektima.

Kvalitet usluga proizvoda, delovanje svih pratećih službi kao i preciznije definisanje uloge svih učesnika u procesu rada, osigurava se prema ovim standardima. Uvođenje ovih standarda dovelo je do povećanja efikasnosti i uspešnosti poslovanja, kao i do ostvarenja našeg krajnjeg cilja – dobijanja odlične ocene našeg rada od strane poslovnih partnera.

As the result of our constant investment in the development of people, equipment and work processes we received certificates ISO 9001, ISO 14001 and ISO 18001 obtained in recent years.

These certificates relating to the design of electrical installations, constructing overhead transmission lines, design of transformer stations and telecommunication facilities as well as production of metal equipment.

The quality of our services and products, logistics and more strictly defined actions of all work participants, is ensured according of these standards. This led to the significant increase of business efficiency and productivity, as well as the achieving of our ultimate goal – getting excellent reviews of our work by our business partners.



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