



POLYTRADE
GLOBAL

COMPANY
OVERVIEW





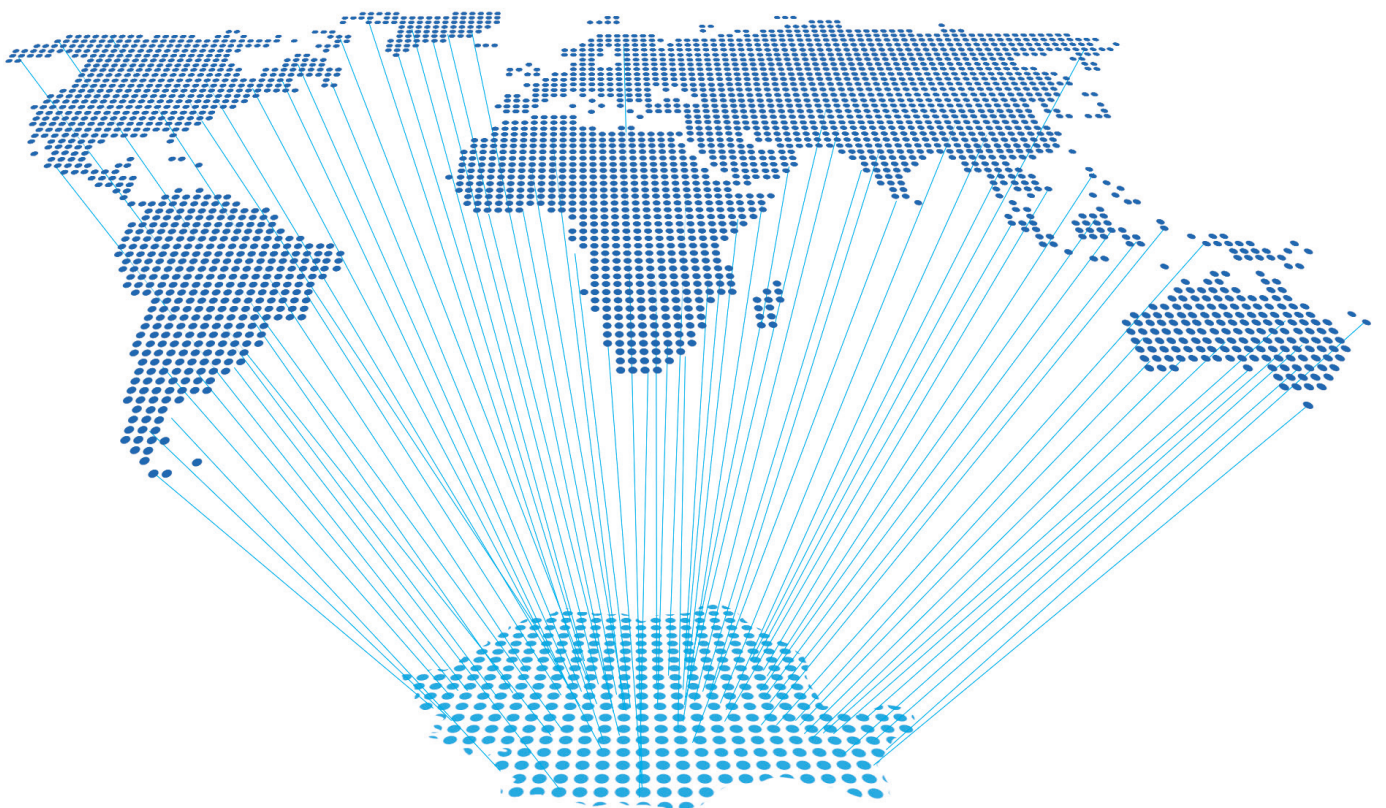
about the company

We emphasize long-term commitment and combine international reach and local intimacy to provide premier professional services from consulting and supplying to commissioning of our products, which come branded as **OPTIVINE, POWERVINE, POLYCONNECT, GRAND VOLTAGE** and **BALKANS POWER CORE**.

In business, confidence is everything. Regardless the business size, you need the right partner. We help you reinvent the way you work. Our team of dedicated people brings together information, quality and competitiveness into a rhythm that will amaze you.

At **POLYTRADE GLOBAL**, we deliver solutions you can count on, tailor made for your needs & requirements, so you can spend more time on what matters most - growing your business.

**WE DARE YOU
TO TRY US!**





fiber optic cables

OPTIVINE is our brand for fiber optic cables. Our products are manufactured to the highest quality, using state of the art equipment and technology.

Fibers	Cables	ADSS	OPUG	MMMP	Micro	Drop	OPGW
1		-	-	-	-	M1	-
2		-	-	-	-	M1, M2	-
4		-	-	-	-	M1 to M4	-
6		M2 to M6	M2 to M6	M2 to M6	M2 to M6	-	-
8		M2 to M8	M2 to M8	M2 to M8	M2 to M8	-	-
12		M4 to M12	M4 to M12	M4 to M12	M4 to M12	-	M6 to M12
16		M4 to M8	M4 to M8	M4 to M8	M4 to M8	-	M8 to M16
24		M4 to M24	M4 to M24	M4 to M24	M4 to M24	-	M6 to M24
32		M4 to M8	M4 to M8	M4 to M8	M8	-	M6 to M12
36		M4 to M12	M4 to M12	M4 to M12	M6 to M12	-	M12
48		M6 to M24	M6 to M24	M6 to M24	M12 to M24	-	M12 to M24
60		M6 to M12	M6 to M12	M6 to M12	M12	-	-
64		M8 to M16	M8 to M16	M8 to M16	M8 to M16	-	-
72		M6 to M24	M6 to M24	M6 to M24	M12 to M24	-	M12 to M24
96		M6 to M24	M6 to M24	M6 to M24	M12 to M24	-	-
108		M12	M12	M12	M12	-	-
128		M8 to M16	M8 to M16	M8 to M16	M8 to M16	-	-
144		M6 to M24	M6 to M24	M6 to M24	M12 to M24	-	-
192		M12 to M24	M12 to M24	M12 to M24	M12 to M24	-	-
216		M12 to M24	M12 to M24	M12 to M24	M12 to M24	-	-
288		M12 to M24	M12 to M24	M12 to M24	M12 to M24	-	-
384		-	M12 to M24	M12 to M24	-	-	-
432		-	M12 to M24	M12 to M24	-	-	-
576		-	M24	M24	-	-	-
720		-	M24	M24	-	-	-
864		-	M24	M24	-	-	-

*** M1 - M24 represents fiber modularity



01

ADSS

When looking for an Aerial Dielectric Self Supporting fiber optic cable, whether your application needs a long or short span, requires increased carrying capacity, harsh environments or custom-made solutions that shall fulfill your expectations, you should be looking for OPTIVINE. Our typical ADSS construction consist of a central FRP, surrounded by jelly filled loose tubes, containing optical fibers, water blocking materials and UV resistant outer sheath. The cable is strong enough to support itself between poles without using conductive metal elements, a feature important when installed along existing overhead transmission lines, and often sharing the same support structures as the electrical conductors.



02

OPUG

Underground fiber optic cables that are designed for duct or direct burial installation, fully dielectric cable or with metallic elements for increased mechanical protection. Due to our new technology, the cables show good flexibility and endurance to repeated bending, excellent mechanical properties and great water blocking function. We can offer custom solutions up to 864 fibers.

03

MMMP

Micro-Module Multi-Purpose cable was designed for FTTH and long-haul networks, for aerial or duct installations, being compact, lightweight and easy to handle. Compared with conventional cables it shows several features that bring benefits inducing significant time and cost savings during laying or jointing process. This special indoor/outdoor cable contains bend-insensitive fibers, protected by easy strippable micro-tubes. Two constructive solutions are common, MOD6 and MOD12, representing 6 or 12 fibers per tube. Other requirements/solutions can be offered upon request.



04

MICROCABLE

Is designed for applications where large numbers of fibers are required and space is limited, especially used in data centers and metropolitan networks. These cables are ultra-compact and lightweight, allowing an easier installation technique by which the cable is “blown” into micro ducts or plastic tubes much smaller than conventional fiber ducts or conduits.

05

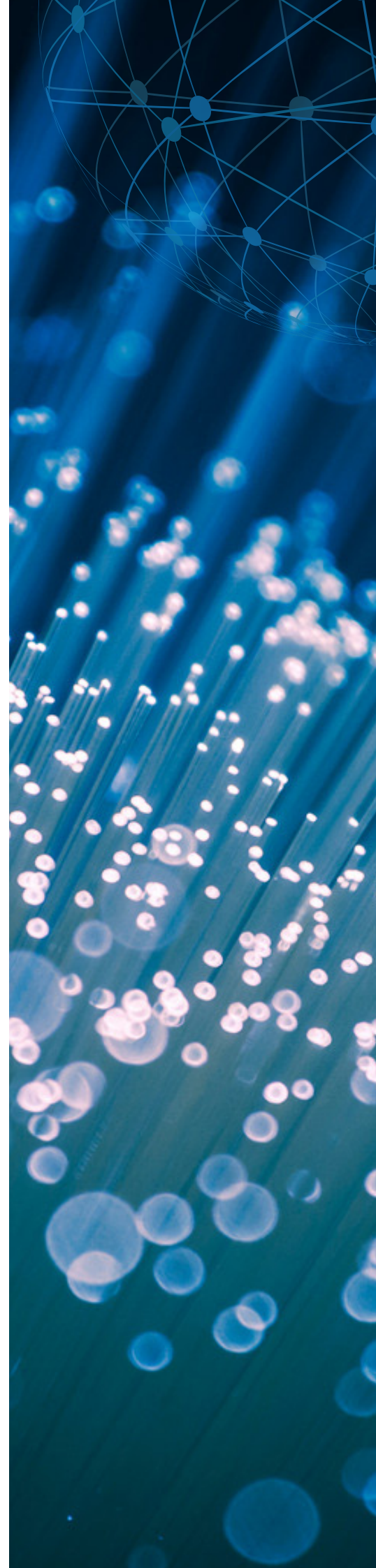
DROP

It's used in the FTTH infrastructure from outdoor or indoor distribution points up to the customer's location. Drop cables are engineered to adapt to various installation environments, including outdoor, indoor or mixed solutions. OPTIVINE offers CPR compliant drop cables with easy access to the fiber, enabling fast and comfortable installations. A wide range of constructive solutions are available.

06

OPGW

These conductors are used in overhead power lines, smartly combining the functions of grounding and communications. Containing single-mode optical fibers with low transmission loss, OPGW allows long distance transmission at high speeds. The optical fiber itself is immune to power transmission line and lightning induction, external electrical noise and crosstalk.



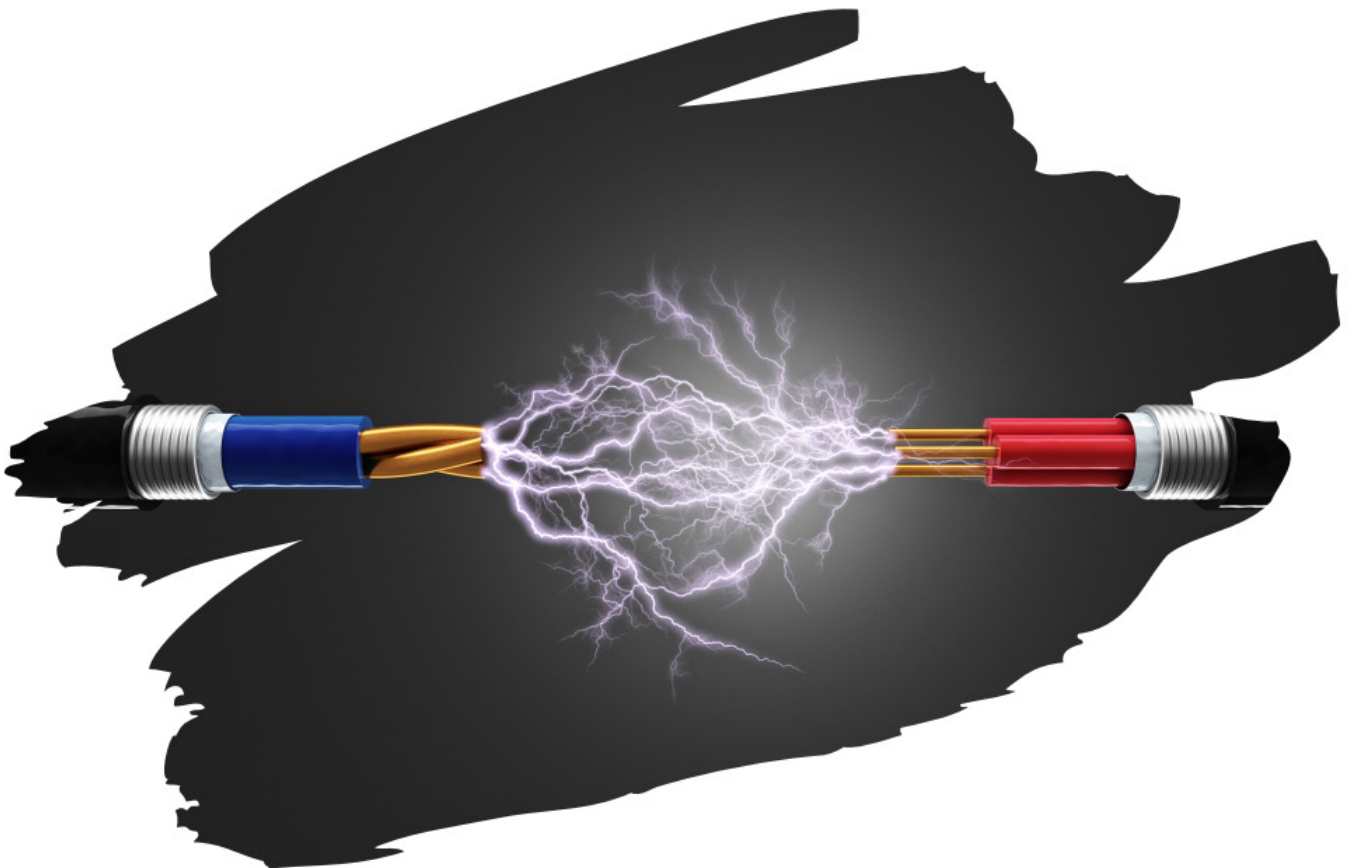


energy cables

Regardless of whether you are looking for low voltage or medium voltage cables, POWERVINE offers you the complete range of products.

Starting from different conductor materials, fillers, insulation, outer sheath materials, flexibility classes, screen types, armored or un-armored cables, you'll find them all in our portfolio.

The range of cables is extremely wide and extends from flexible power cables with PVC, PE, XLPE and rubber compounds starting from 300V up to 35kV, with steel or aluminum wire or tape armored, to cables for safety circuits.





01 Low Voltage Copper

Code	Construction	Construction	Cross-section (mm ²)	No. of Conductors	Flexibility Class
NY Y, CY Y		Cu/PVC/PVC	1.5 to 630	Up to 40	Class 1 to Class 7
N2XY, U1000R2V, RV-K		Cu/XLPE/PVC	1.5 to 630	Up to 40	Class 1 to Class 7
N2XH, RZ1-K		Cu/XLPE/LSZH	1.5 to 500	Up to 40	Class 1 to Class 7
NHXH, SZ1-K		Cu/LSZH/FRP	1.5 to 300	Up to 40	Class 1 to Class 7
NYCY, CYCY		Cu/PVC/CWS/PVC	1.5 to 300	Up to 40	Class 1 to Class 7
N2XCY, C2XCY		Cu/XLPE/CWS/PVC	1.5 to 300	Up to 40	Class 1 to Class 7
N2XCH, C2XCH		Cu/XLPE/CWS/LSZH	1.5 to 300	Up to 40	Class 1 to Class 7
NYBY		Cu/PVC/STA/PVC	1.5 to 400	Up to 5	Class 1 to Class 5
N2XBY		Cu/XLPE/STA/PVC	1.5 to 400	Up to 5	Class 1 to Class 5
H07RN-F		Cu/EPR/OFR	1.5 to 630	Up to 40	Class 5, Class 7
PV1-F		Cu/XLPE/LSZH	1.5 to 120	1	Class 5, Class 7

02 Low Voltage Aluminum

Code	Construction	Construction	Cross-section (mm ²)	No. of Conductors	Flexibility Class
NAYY, ACYY		Al/PVC/PVC	1.5 to 300	Up to 5	Class 1 to Class 5
NA2XY, U1000AR2V		Al/XLPE/PVC	1.5 to 300	Up to 5	Class 1 to Class 5
NA2XH		Al/XLPE/LSZH	1.5 to 300	Up to 5	Class 1 to Class 5
NAYBY		Al/PVC/STA/PVC	1.5 to 300	Up to 5	Class 1 & Class 2
NA2XBY		Al/XLPE/STA/PVC	1.5 to 300	Up to 5	Class 1 & Class 2

03 Medium Voltage Cu & Al

Code	Construction	Conductor Cross-Section (mm ²)	Screen Cross-Section (mm ²)	Voltage Level (kV)	Current Carrying Capacity*	
					Air (A)	Ground (A)
N2XS(F)2Y		35 to 600	16 to 35	3.6 to 35	1096	875
N2XS(FL)2Y		35 to 630	16 to 35	3.6 to 35	1096	875
N2XSH		35 to 630	16 to 35	3.6 to 35	1096	875
NA2XS(F)2Y		35 to 630	16 to 35	3.6 to 35	953	719
NA2XS(FL)2Y		35 to 630	16 to 35	3.6 to 35	953	719
ABC		35 to 150	-	6 to 30	367	-



04

Aluminum & Copper Wire Rope

These products can achieve maximum flexibility by using a high amount of stranded wire, with application in power distribution, industrial and defense sector. The classification of bunched wires is based on geometric arrangement, lay length and direction as per customer's demand, packed in drums, from 7 to 1235 pieces bunched wires.

Standard:

ASTM B8, ASTM B172, ASTM B173

Diameter:

0,19mm - 0,60mm

Weight:

500 kg - 1000 kg



Material	Structure	Flexibility Class	Wire Diameter (mm)	Overall Diameter (mm)	Cross-section (mm)	Weight (Kg)
Copper or Tinned Copper		Class 5	0.3	3.1	6	49
			0.4	4.5 - 10.3	10 - 50	84 - 426
			0.5	12.3 - 24.9	70 - 300	611 - 2479
Copper		Class 2	1x2.7 - 1x4.4	2.7 - 4.4	6 - 16	50.9 - 135.3
			7x1.03 - 7x2.52	3.1 - 7.6	6 - 35	52.4 - 314
			19x1.78 - 19x2.52	8.1 - 11.4	50 - 95	425 - 851
			37x2.03 - 37x2.52	12.9 - 16	120 - 185	1076 - 1658
			61x2.21 - 61x2.52	18.2 - 20.3	240 - 300	2102 - 2733
Aluminium		Class 2	7x 2.1 - 3.0	6.3 - 9.0	25 - 50	66 - 135
			19x 2.1 - 2.8	10.5 - 14.0	70 - 120	181 - 321
			37x 2.25 - 2.5	15.8 - 17.5	150 - 185	405 - 500
			61x 2.25 - 2.8	20.3 - 29.1	240 - 400	669 - 1112



05 Steel Wire Rope

Are products which operate in demanding conditions and must resist crushing, bending fatigue and abrasion. Depending on constructive structure, the range of wire ropes are: marine grade, compact strand, non-rotating, coated wire, spiral strand or fully locked coil. We can provide steel ropes for cranes, bridges, mines, ship industry, automotive and other special applications.

Designation	Type	Construction	Diameter (mm)	Weight (kg/m)
General Use Rope	6 x 7	6X7 M [6X(1+7)]	8 - 20	0.22 - 1.38
General Use Rope	6 x 19	6x19 M [6X(1+6+12)]	8 - 44	0.22 - 6.7
General Use Rope	6 x 19s	6x19 S [6X(1+9+9)]	8 - 35	0.23 - 4.40
General Use Rope	6 x 19w	6x19 W [6X(1+6+(6+6))]	8 - 44	0.23 - 6.95
General Use Rope	6 x 37	6x37 M [6X(1+6+12+18)]	8 - 66	0.24 - 15.07
General Use Rope	6 x 36w	6x36 WS 6X(1+7+(7+7)+14)]	8 - 58	0.24 - 14.11
General Use Rope	8 x 19w	8x19 W [8X(1+6+(6+6))]	8 - 52	0.22 - 9.19
General Use Rope	8 x 19s	8x19 S [8X(1+9+9)]	8 - 50	0.22 - 8.50
General Use Rope	8 x 36ws	8x36 WS 8X(1+7+(7+7)+14)]	10 - 60	0.36 - 12.82
Rotational Resistant Rope	18 x 7	18X7 [6X(1+6)+12X(1+6)]	10 - 40	0.38 - 6.12
Rotational Resistant Rope	35 x 7	35X07 [6X(1+6)+11X(1+6)+17X(1+6)]	10 - 40	0.39 - 6.2
High Performance Rope	18 x 7	18X7 [6X(1+6)+12X(1+6)]	10 - 40	0.38 - 6.12

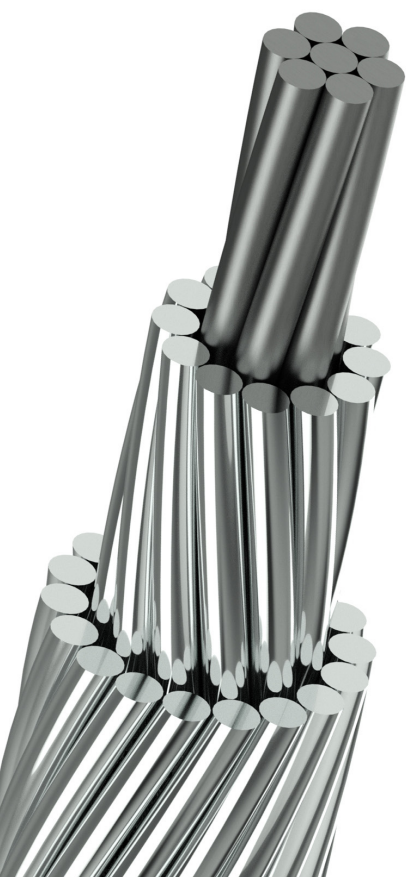




06 ACSR Conductor

Aluminium Conductor Steel-Reinforced is a type of high-capacity, high-strength stranded conductor, typically used as active conductor in overhead power lines. This type of conductor is suitable for medium and long span applications thanks to the high value of specific mechanical resistance and good transport capacity. To prevent the galvanic corrosion, a thin zinc coating on the wire is carried out.

Standard	Conductor Diameter Range (mm)		Conductor Approx. Weight Range (Kg/Km)		Conductor Cross Section Range (mm ²)		Ampacity Range (A)	
	Min	Max	Min	Max	Min	Max	Min	Max
IEC	5.53	47	64.6	3,867	18.7	1,303	149	2,450
DIN	5.4	43	62	3,249	17.8	1,090.90	105	1,580
BS	4.5	31.77	43	1,999	12.39	597.20	67	763
GOST	4.5	42.4	42.7	3,210	12.37	1,059.50	113	2,105
ASTM	5.04	40.7	53.5	3,087	15.51	976.72	78	975
NBR	5.04	38.22	53.7	2,672.10	15.52	863.13	132	1,844
NFC	8.3	38.01	155	3,151	37.69	865.39	221	1,735
JIS	6	38.4	76.12	2,700	21.9	870.8	166	1,854



07 TACSR Conductor

Thermal Resistant Aluminum Alloy Conductor Steel Reinforced, consists of one or more layers of thermal resistant aluminium zirconium alloy (AT1) wires stranded over a central core of zinc coated steel wires. TACSR conductors provide a higher current carrying capacity than traditional ACSR conductors, using the same installation technique.

Standard	Conductor Diameter Range (mm)		Conductor Approx. Weight Range (Kg/Km)		Conductor Cross Section Range (mm ²)		Ampacity Range (A)	
	Min	Max	Min	Max	Min	Max	Min	Max
IEC	10.5	35.1	233	2,252	58	680	378	1,794.00

* Design and structures will be presented on request. Other standards may be applied.

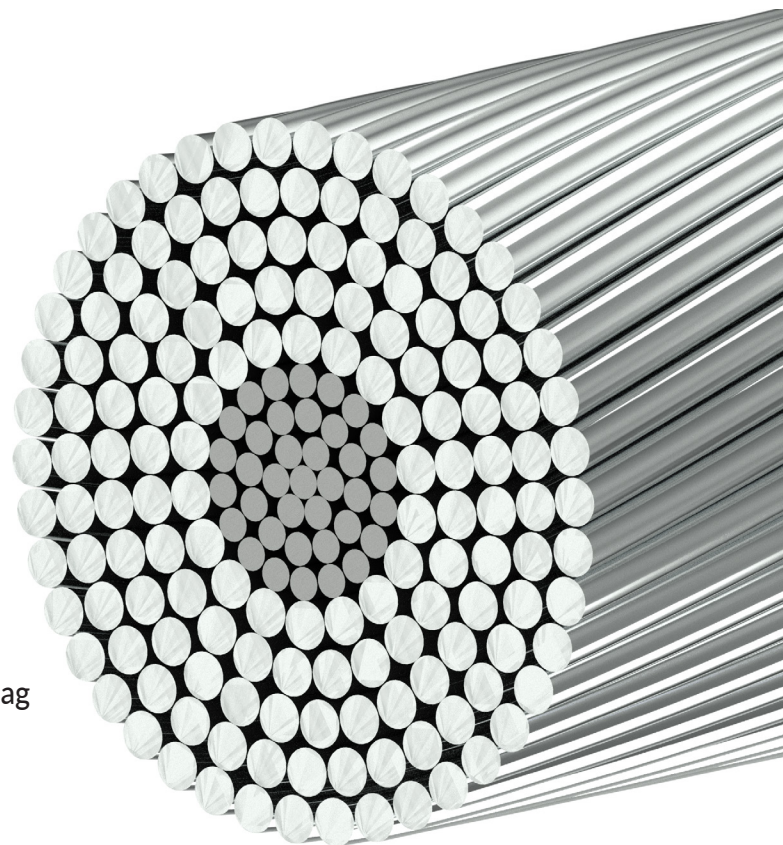


08 ACSS Conductor

Aluminum Conductor Steel Supported is suitable for operating at high temperature without losing the mechanical properties. The final sag-tension performance is not affected by the long term creep of aluminum. This conductor is a concentric-lay stranded conductor, with one or more layers of hard drawn and annealed 1350-0 aluminum wires on a central core of steel. Under normal operating conditions, the mechanical load of ACSS is mainly derived from the steel core, as aluminum in fully annealed stage does not contribute much towards the mechanical strength.

Features:

- Improved conductivity
- Better self damping property
- Very low sag at high temperature
- High current carrying capacity
- Excellent immunity to vibration fatigue
- Long term creep of aluminum does not affect final sag



Standard \ Values	Conductor Diameter Range (mm)		Conductor Approx. Weight (Kg/Km)		Conductor Cross Section Range (mm ²)		Ampacity Range (A)	
	Min	Max	Min	Max	Min	Max	Min	Max
ASTM	16.3	45.77	545	3,754	157	2312	780	2,774

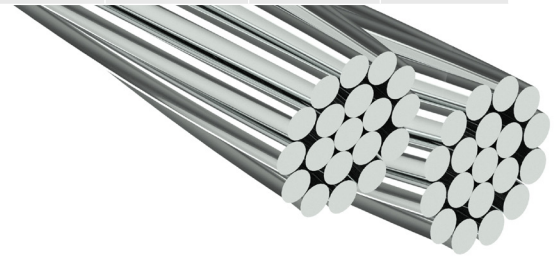
* Design and structures will be presented on request. Other standards may be applied.



09 AAAC Conductor

All Aluminium Alloy Conductors, are used for primary and secondary transmission in bare overhead distribution and transmission lines. It has a good corrosion resistance, however due to the absence of steel, its resistance is lower than ACSR. In the same time AAAC offers lesser corona losses and ratio interference at EHV and can be operated with stable temperature of 85°C towards ACSR conductors which are stable up to 75°C. Since AAAC has higher strength-to-weight ratio, span can be increased up to 15% resulting in overall reduction of costs.

Standard	Values		Conductor Diameter Range [mm]		Conductor Approx. Weight [Kg/Km]		Conductor Cross Section Range [mm ²]		Ampacity Range [A]	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
IEC, A2	5.49	49.4	50.4	3,973.7	18.4	1,439	150	2,401		
IEC, A3	5.52	46.9	50.8	3,594.4	18.6	1,301	151	2,252		
EN, AL4	5.1	52	43.4	4,427.5	15.9	1,595.9	135	2,650		
EN, AL3	5.55	41	51.4	2,735.2	18.8	996.2	151	1,953		
EN, AL5	20.1	41	659.4	2,753.2	239.4	996.2	789	1,992		
JIS	6	38.4	76.12	2,700	21.9	870.8	166	1,854		



10 AAC Conductor

All Aluminium Conductors, are used in low, medium and high voltage overhead lines, having high ratio of electrical conductivity to weight, high flexibility and low UTS. It also has a very good resistance to corrosion, but low specific mechanical resistance which makes it suitable for short spans.

Standard	Values		Conductor Diameter Range [mm]		Conductor Approx. Weight Range [Kg/Km]		Conductor Cross Section Range [mm ²]		Ampacity Range [A]	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
IEC	4.05	50.4	27.4	4,143.1	10	1,500	108	2,738		
DIN	5.1	41.1	43	2,767	16	1,000	110	1,540		
BS	6.2	36.6	64	2,191	23.3	794.8	114	899		
GOST	5.1	36.9	43	2,020	16	800	144	1,808		
ASTM	4.7	54.8	37	4,985	13.29	1,773	72	1,425		
NBR	4.65	54.86	36.2	4,993.4	13.21	1,776.31	129	3,036		
NFC	4.85	28.35	32.8	1,324	11.93	475.38	66	671		
JIS	6.9	46.2	79.48	3,499	29.09	1,260	150	1,585		



11 ACS Wires

Aluminium Clad Steel wires are widely used in long-span transmission lines, overhead ground conductors, extra high voltage overhead conductors, or in the cable industry for the manufacturing of Optical Ground Wires (OPGW). ACS can be used in alternative applications as helical hardware for overhead lines or where the resistance to the corrosion is an important factor.

Standard	Values	Conductor Diameter Range (mm)		Conductor Approx. Weight (Kg/Km)		Conductor Cross Section Range (mm ²)		Max. DC Resistance at 20oC [Ω /km]	
		Min	Max	Min	Max	Min	Max	Min	Max
ASTM-B416		5.58	32.3	104.8	4,170	15.78	620.6	0.14	5.42
DIN 48201		6.3	22.5	162	2,017	24.25	299.43	0.29	3.55

* Design and structures will be presented on request. Other standards may be applied.



12 GSW Conductor

Galvanized Steel Wire conductors are intended for use as overhead ground wires for transmission lines. They are also suitable for use as guy and messenger wires, or as steel core wire which is used for the reinforcement of ACSR, ACSS and other conductors.

Standard	Values	Conductor Diameter Range (mm)		Conductor Approx. Weight Range (Kg/Km)		Conductor Cross Section Range (mm ²)	
		Min	Max	Min	Max	Min	Max
IEC		6.66	26.83	213.3	3,383.2	27.1	427
DIN		6.3	14	192	929	24.25	116.99
BS		3	23.8	43	2,630	7.07	444.65

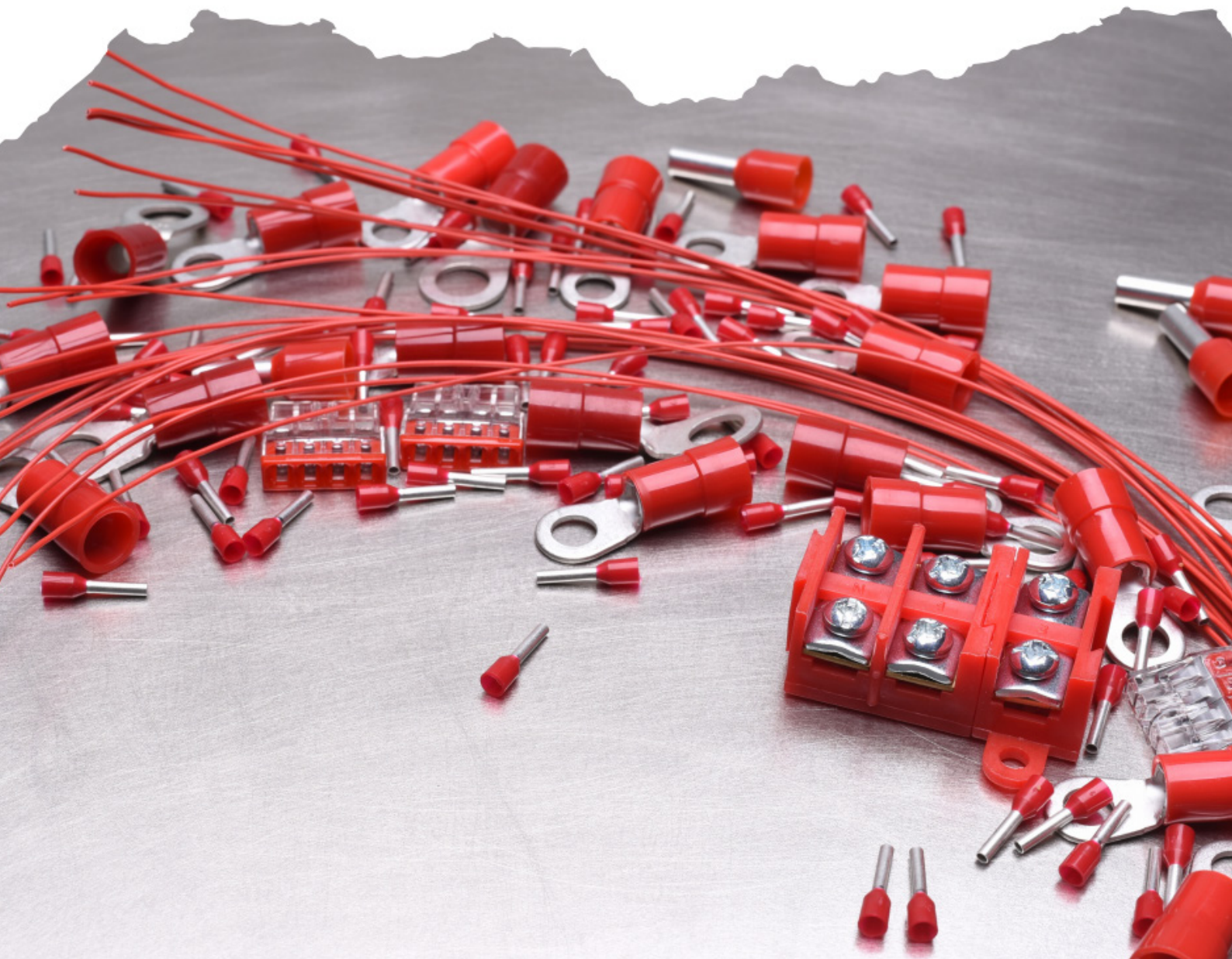




fittings & accessories

Our portfolio includes a wide range of fittings and accessories, from Low Voltage to High and Extra High Voltage.

We can provide cable systems, cable lugs and cleats, clamps and fittings for overhead lines and substations, metallic enclosures and many other complementary items.

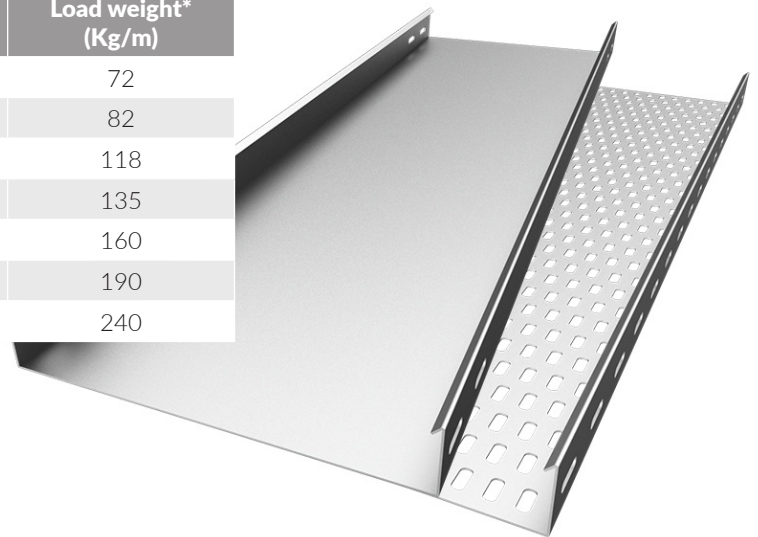




01 Perforated & Solid Cable Tray

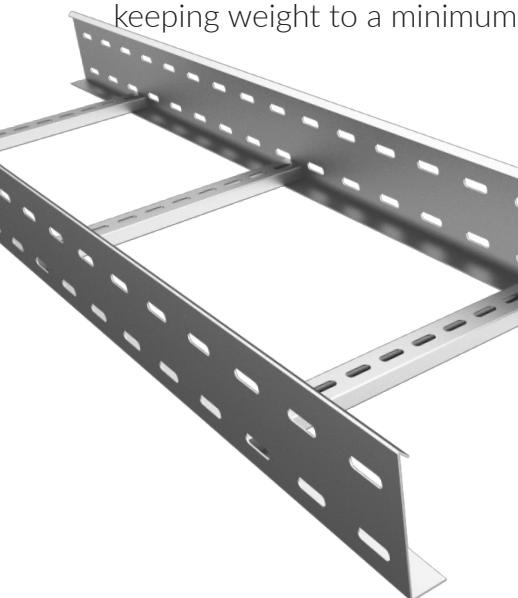
A perforated and solid cable tray is a one-piece support with either ventilated (perforated) or solid bottom (non-perforated) sections. These sections are used with a single power cable, multiple control, or signalling cables, designed to support cabling in 3.0 m spans or less.

Height (mm)	Width (mm)	Thickness (mm)	Load weight* (Kg/m)
25	50 to 600	0.6 to 2	72
35	50 to 600	0.6 to 2	82
40	50 to 600	0.6 to 2	118
50	50 to 900	1.2 to 2	135
60	50 to 900	1.2 to 2	160
75	100 to 900	1.2 to 2	190
100	100 to 900	1.2 to 2	240



02 Cable Ladder

Ladder consists of two longitudinal side members (side beams) connected by individual traverse (rungs) members. It is intended for use as a power cable or control cable support, designed to reduce overall weight in sensitive environments while increasing strength. Ideal for offshore and modular applications where weight is a challenge. Our product is optimized to exceed load requirements while keeping weight to a minimum by using I-beam side rails.



Height (mm)	Width (mm)	Thickness (mm)	Load weight* (Kg/m)
50	100 to 1000	1.2 to 2	98
60	100 to 1000	1.2 to 2	110
70	100 to 1200	1.2 to 2	125
80	100 to 1200	1.2 to 2	160
100	100 to 1200	1.2 to 2	180
125	150 to 1200	1.2 to 2	230
150	150 to 1200	1.2 to 2	280



03 Wire Mesh Cable Tray

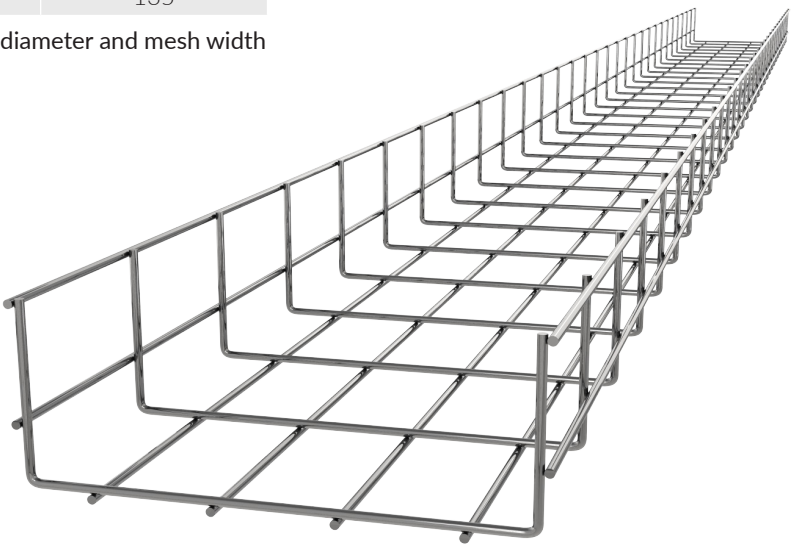
Wire mesh cable trays are produced from high mechanical strength steel wire. The mesh permits continuous airflow to help prevent heat buildup. This open design also prevents the accumulation of dust, contaminants and bacterial proliferation and is primarily used for the support of low voltage, telecommunication and fiber optic cables. The life expectancy of a cable support system is dependent on the environment in which it is placed, therefore it is important to establish the corrosive properties of an environment to ensure that the right treatment and the right materials are chosen.

Height (mm)	Width (mm)	Thickness (mm)	Load weight* (Kg/m)
25	50 to 600	0.6 to 2	72
35	50 to 600	0.6 to 2	82
40	50 to 600	0.6 to 2	118
50	50 to 900	1.2 to 2	135

*Values valid for 1.35 m support distance and maximum wire diameter and mesh width

Treatment types

Electro-Galvanized - electrolytically, a zinc coating is deposited on the steel. The baths used consist of acid or alkaline solutions of zinc salts. The minimum coating thickness by this method is 8µm. Such products are intended for use only in warm, dry areas with negligible pollutant levels.



Pre-Galvanized - this galvanization method is the one which is practiced before there is any fabrication done over the material. This homogeneous coating thickness on the surfaces has a value from 10µm to 20µm (70gr/m² 140gr/m²) in accordance with EN 10346. Is recommended to be used inside buildings where dry air is present.

Hot Dip Galvanized - is a coating method performed by dipping iron and steel products suitable for galvanizing into a molten zinc bath. The minimum coating thickness on the surfaces is 45µm (325gr/m²) and the average coating thickness is about 55µm (395gr/m²) in accordance with EN ISO 1461 quality standard. Usage of hotdip galvanized cable trays is suitable in any environments and it can keep its protective feature even in the heaviest atmospheric conditions.



04

Cable Lugs & Connectors

We offer a wide range of Tinned Copper, Aluminium and Bi-metallic compression connectors, suitable for the various types of conductors. The dimensions of the tubes are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pullout.

LUGS			
Material	Cable Size (mm ²)	Stud Size	Length (mm)
Aluminium	50 to 600	0.6 to 2	82
Tinned Copper	50 to 600	0.6 to 2	118

CONNECTORS			
Material	Cable Size (mm ²)	Stud Size	Length (mm)
Aluminium	50 to 600	0.6 to 2	82
Tinned Copper	50 to 600	0.6 to 2	118



05

Cable Sleeves, Joints & Terminal Ends

Low and Medium Voltage cable joints and terminations can be supplied in different constructive structures: paper insulated (PILC), plug-in, armored or non-armored, single core or three core cable with wire, tape screen and AL tube for polymeric cables, belted or screened for paper insulated (PILC) cables. Our product range includes joints designed for special applications: shield break, transition and repair joint kits.



Type	Cable Max cross-section (mm ²)	Length (mm)	Tension (kV)
LV	1.5 - 70	200 - 700	0.6 / 1
LV	95 - 300	500 - 1100	0.6 / 1
LV	300 - 500	500 - 1100	0.6 / 1
MV	10 - 240	650 - 1100	12 / 24 / 36
MV	150 - 500	650 - 1100	12 / 24 / 36
MV	500 - 1000	650 - 1100	12 / 24 / 36



06

Metallic Enclosures

The metallic boxes offered by us consist of products with different dimension, having base colour RAL 7035 Grey, and include galvanized mounting plate. Our products provide innovative and efficient solutions, easy to install, designed for safe and reliable electrical distribution applications.



Width (mm)	Height (mm)	Depth (mm)	Protection degree	Thickness (mm)	Color
200	50 to 600	0.6 to 2	IP54	1.2	RAL 7035 Grey
300	50 to 600	0.6 to 2	IP54	1.2	RAL 7035 Grey
400	50 to 600	0.6 to 2	IP54	1.2	RAL 7035 Grey
500	50 to 900	1.2 to 2	IP54	1.2	RAL 7035 Grey
600	50 to 900	1.2 to 2	IP54	1.2	RAL 7035 Grey
700	100 to 900	1.2 to 2	IP54	1.2	RAL 7035 Grey
800	1000-14000	250-400	IP54	1.2	RAL 7035 Grey

07

Clamps & Fittings

PolyConnect offers a wide range of clamps and fittings used in electric applications with rated voltages from 20kV to 400kV. Depending on the product type, the materials used can be aluminium and aluminium alloys, copper and copper alloys, galvanized steel and bronze. For electrical substations our portfolio includes couplers, connectors, bus support clamps, terminals and expansion connectors, etc. For electrical transmission lines we provide the complete range of clamps and accessories including shackles, sockets, tension clamps, suspension clamps, vibration dampers, armour rods, warning spheres, etc.

TYPES OF CONNECTORS & FITTINGS	TENSION LEVEL						
	1 KV	20 KV	30 KV	110 KV	145 KV	220 KV	400 KV
OHL INSULATED	x	x	x	-	-	-	-
OHL UNINSULATED	x	x	x	x	x	x	x
EARTHWIRE	-	x	x	x	x	x	x
SUBSTATION	-	x	x	x	x	x	x
CLEATS	x	x	x	x	x	x	x





08

Fasteners



We are providing high-quality metal components using processes such as precision machining, casting, forging, stamping & extrusion. Our customers are companies from a wide variety of targeted industries such as power, automotive, construction, machine building, mining, furniture, ship building, roadwork and wholesalers. They all need fasteners in their projects, reason for which we enriched our portfolio with these products.

Our portfolio consists of fastening systems as steel and stainless-steel screws and bolts, nuts, washers, nylon wall plugs, hammer-in fixtures, frame anchors, through bolts, concrete screws, insulation anchors, metal anchors, shims, stamping parts and turning parts. We can offer standardized products according to ISO and DIN as well as custom made designs, with a wide range of coatings such as zinc flake, galvanized zinc, zinc nickel, etc.





equipments

Our company brings in its portfolio several products with targeted use, represented by medium and high voltage equipment for electric substations and overhead lines, such as:

- Post insulators
- Suspension and Tension Insulators
- Insulator Strings
- Switch Disconnectors
- Transformers
- Generators
- Charging Stations
- Energy Storage





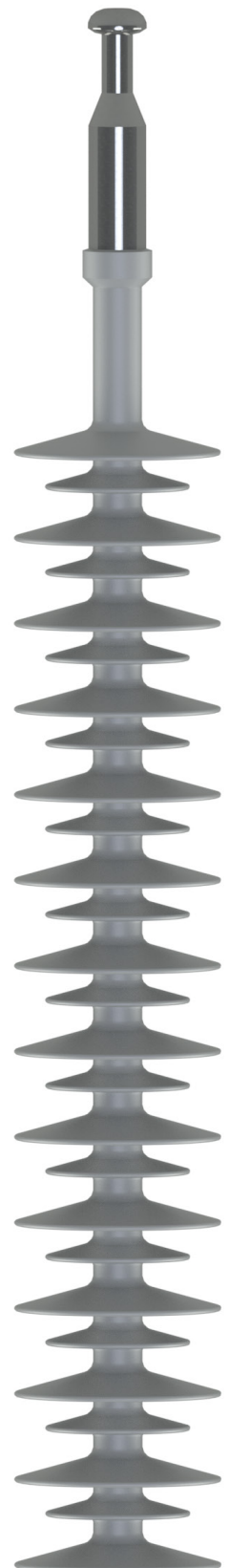
01 Insulators & Strings

Strings are a series of two or more tension or suspension insulators, flexibly connected by using various clamps and hardware fittings. There are four types of insulator strings: single tension string, double tension string, single suspension string, double suspension string, all of these in different configurations and heights.

Suspension Composite Insulators - are used to support a conductor of an overhead transmission line, consisting of one or a string of insulating units suspended from a pole or tower, with the conductor attached to the end.

Tension Composite Insulators - are designed to work in mechanical tension (strain), to withstand the pull of a suspended electrical cable or conductor. They are used in overhead transmission lines, between two lengths of a conductor, to isolate them electrically from the tower while maintaining an electrical connection.

Post Composite Insulators - are used to support different equipments in a substation. These insulators are generally subjected to bending, torsion and compression forces in service. They can support the structure horizontally as well as vertically. Available for MV and HV level, these insulators with silicone rubber sheds offer significant benefits over traditional ceramics with superior insulation properties, flash-over resistance, and low weight.



TYPE OF INSULATORS & STRINGS	TENSION LEVEL	POLLUTION ZONE			CONNECTION TYPE			
		II	III	IV	SS	SB	BB	Tailor- made
STRING INSULATORS	≤30 KV	x	x	x	x	x	x	x
LINE POST INSULATORS		x	x	x	-	-	-	x
STRING INSULATORS	30 to 69 KV	x	x	x	x	x	x	x
STRING INSULATORS	69 to 110 KV	x	x	x	x	x	x	x
POST INSULATORS		x	x	x	-	-	-	x
STRING INSULATORS	110 to 145 KV	x	x	x	x	x	x	x
POST INSULATORS		x	x	x	-	-	-	x
STRING INSULATORS	145 to 220 KV	x	x	x	x	x	x	x
POST INSULATORS		x	x	x	-	-	-	x
STRING INSULATORS	220 to 400 KV	x	x	x	x	x	x	x
POST INSULATORS		x	x	x	-	-	-	x

*Connection type for all post and/or line post insulators is tailor-made acc to client' specifications.



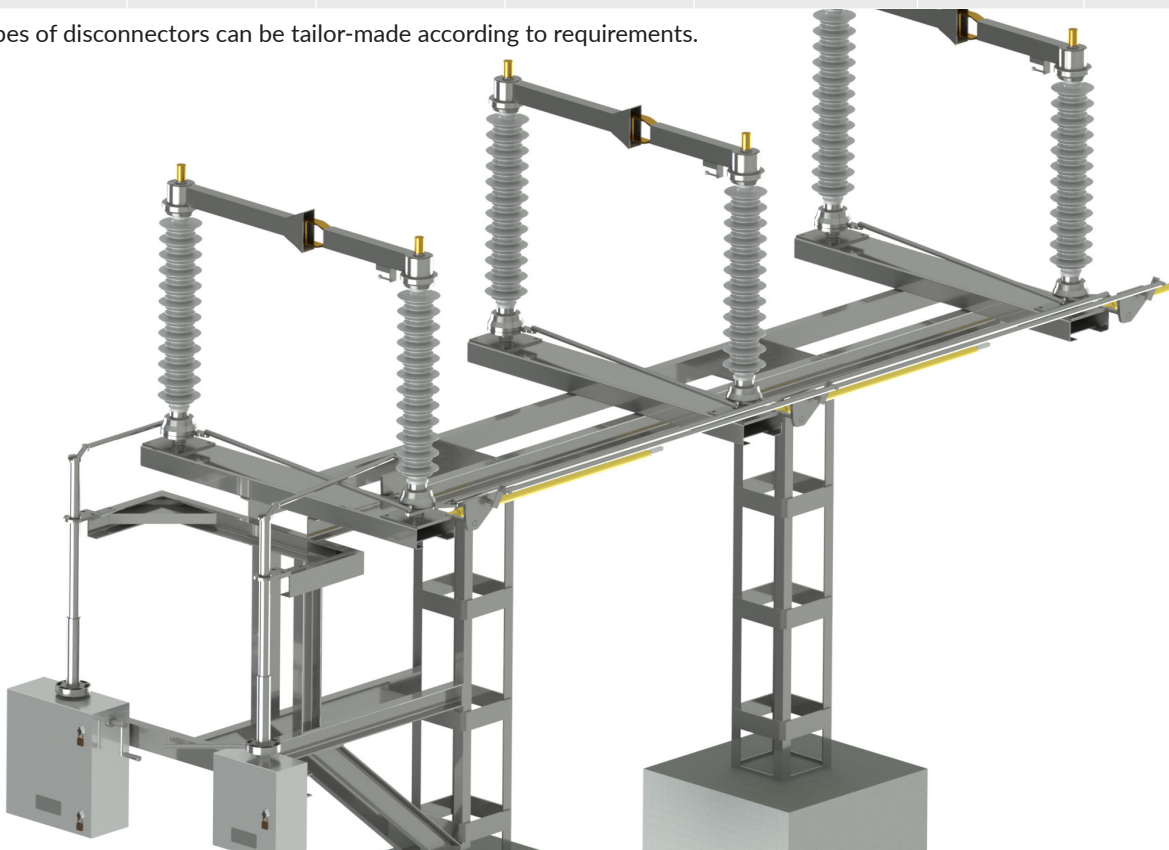
02

Switch Disconnectors

Also known as Disconnector, it is a switching device used to isolate an element of the electrical network (HV line, transformer, portion of electrical station, etc.). It ensures network operators that the electrical circuit is de-energized and that they can proceed to maintenance or repairs, safely, without electrical risks. Visible breaking of the circuit is possible by using such a disconnector switch. These products can be operated mechanically or automatically, available with single-pole construction and three-pole construction. The disconnectors can be equipped with earthing switch where the application requires.

TENSION LEVEL	DISCONNECTOR TYPE					
	Center break	Pantograph	Vertical break	Double side break	Pole mounted	
					Standard	Arc chamber
12 KV	-	-	x	-	x	x
20 KV	-	-	x	x	x	x
36 KV	x	-	x	x	x	x
72.5 KV	x	-	x	x	-	-
110 KV	x	x	x	x	-	-
145 KV	x	x	x	x	-	-
220 Kv	x	x	x	x	-	-
400 KV	x	x	x	x	-	-

* Other types of disconnectors can be tailor-made according to requirements.





03

Transformers

Various types of transformers based on voltage, power and regulation are part of our portfolio, such as Power Transformers, Current Transformers and Voltage Transformers.

It can be oil/paper, oil filled or dry insulated. Design and manufacturing are in accordance with international standards (IEC, IEEE, etc.). Our company can provide transformers up to 500kV and 1000MVA.



The prefabricated transformation stations are used in three-phase medium voltage distribution networks, radial or loop. They are made of reinforced concrete foundation and concrete prefabricated shell, water and oil resistant. The housing is equipped with a natural ventilation system, which provides a degree of protection IP 54 for medium and low voltage chambers and a global degree of protection of IP 45 for the entire station and temperature class (10K for transformers up to 250 KVA and 20 K for transformers larger than 400 KVA).

From the point of view of access to electrical equipment, the stations are made in two constructive variants with access from outside or inside, depending on the customer's application.





04

Generators

Gensets are critical for power supply. They represent the backup plan in any of the industries: Healthcare, Construction, Data Center, Mining, Shipping, Telecom and others.

We can provide monophase or three phase generators, fueled with diesel or gas, for on-site application up to 2500kVA, mobile gensets from 10 kVA up to 1200kVA, for telecom or other special projects that require customized design with specific characteristics.

With reliable brands for each type of components, we can assure our customers of reliable products with long term guarantee.





05

Charging Stations



The world is rapidly evolving, and technology is one of the key elements. Electric vehicles, whether we speak of automotive, marine or airship will need a charging source.

We can provide AC or DC fast chargers, for one or multiple EV units. Each charger can be integrated in a charging infrastructure network and its operation and status is controlled by the central management system.

06

Energy Storage

Our battery storage systems can be customized to meet the client's requirements and the applications it will be used for. By battery storage we can provide power conversion, whether converting between AC and DC, changing the voltage or frequency.

The enclosures are built to resist to any kind of working environment or weather conditions. The battery management is assured by a dedicated software, by which you can choose between efficiency, balanced or better performance.

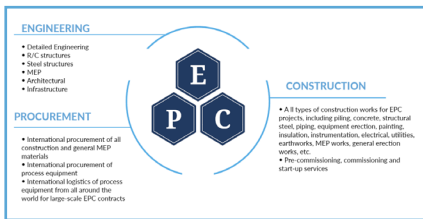
Our solutions can be provided for home application, industrial or special projects.



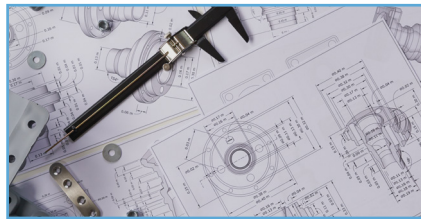


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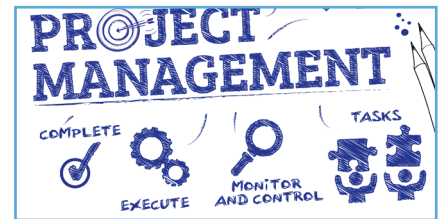
Services



EPC Contracting



EPC Contract Engineering & Design Of Electrical Projects



Project Management



Low, Medium & High Voltage Aerial Lines Installation



Low, Medium & High Voltage Underground Lines Installation



High Voltage Electrical Substations Installation



Telecom Installation



Aerial & Underground Railway Lines Installation



Photovoltaic Installation



Inside Ships Installation



Subsea or Lakes Installation



Electrical Appliances Installation

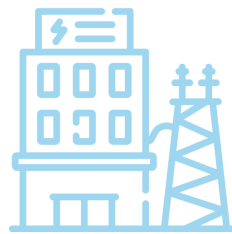


02

Industry



POWER & UTILITIES



We are providers of complete contracting and installation services for power plants and overhead line projects, on a turn-key basis, using diverse types of equipment and flexible, innovative technology concepts.

TELECOMMUNICATIONS



Our and our partners' project management and implementation expertise, includes wireline and wireless systems, normal and critical facilities. Services range from radio frequency (RF) engineering to site commissioning.



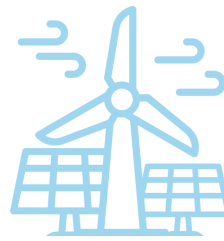


02

Industry



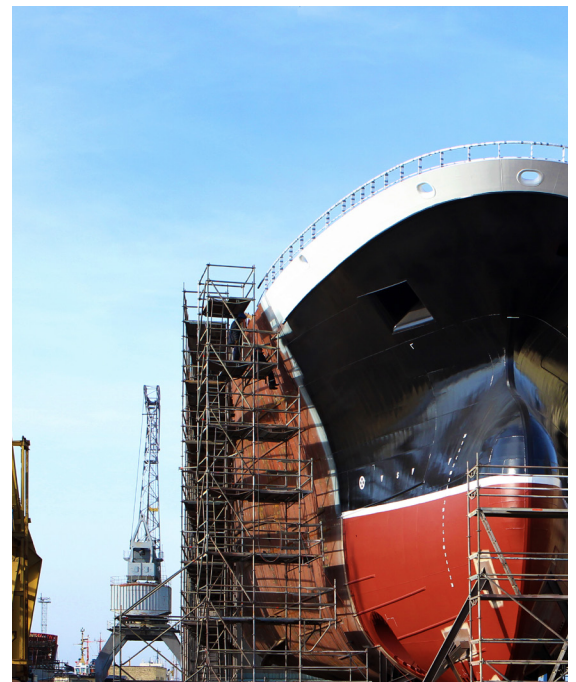
RENEWABLES



We want to make it easy for clients to make the move to solar, wind or any renewable energy system. Our EPC team manages the entire implementation process. We can take over the leading process for energy and telecom specialties, becoming a general contractor.

MARINE & SUBMARINE

Whatever the challenge, we bring together with our partners, marine and submarine solutions. For topside, subsea and lakes, ships and shipyards, we provide practical, efficient, and competitive services.

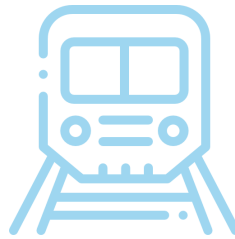




02 Industry



RAILWAY & ROLLING STOCK



We have the capacity and the know-how to perform high value-added installation works for any type of railway or rolling stock projects. Regardless if it is for high speed or freight trains, in the mountains or near the sea, we can get the team ready for any challenge.

RESIDENTIAL & INDUSTRIAL

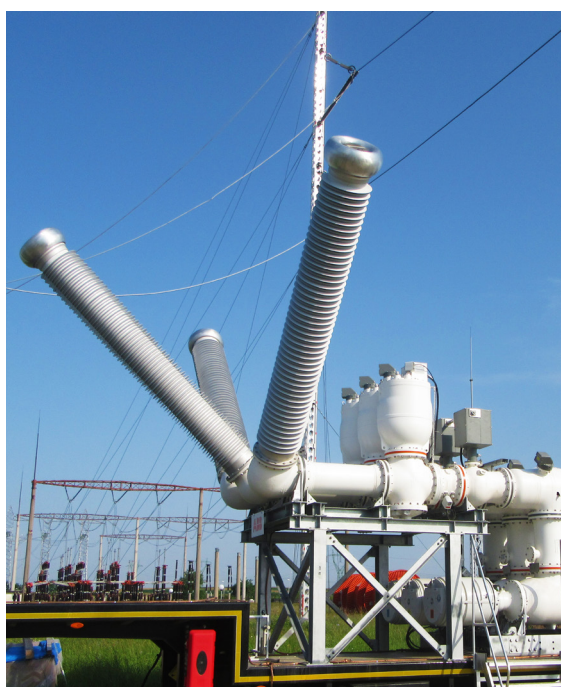
To meet client's need and high expectation, our team has extensive of tried and tested solutions to manage even high-complexity residential and industrial projects. From projects of luxury apartments and restaurants to complex factories and silos, we have done them all.





03

Projects



400kV Mobile GIS Substation Bradu & Sibiu



Auto Charging Station City Hall 3rd District Bucharest





03

Projects



Industrial Silos Silistea



Luxury Vegan Restaurant Floreasca Tower





03

Projects



Auto Charging Station Mihai Bravu High School



Abattoir Avicola Calarasi (Aaylex Group)





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