LOW VOLTAGE & HIGH VOLTAGE ALUMINUM CABLES



GaryLion®

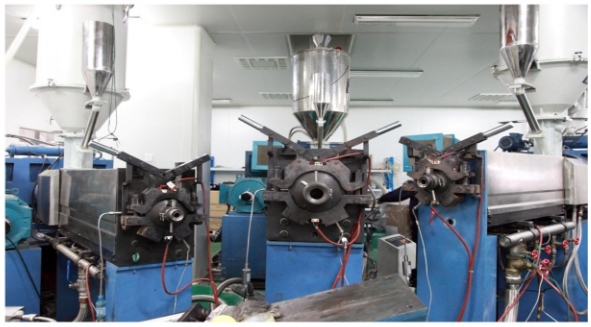
CHANGFENG WIRE & CABLE CO.,LTD

connectingthe**world** www.changfenggroup.com

CHANGFENG WIRE & CABLE CO LTD

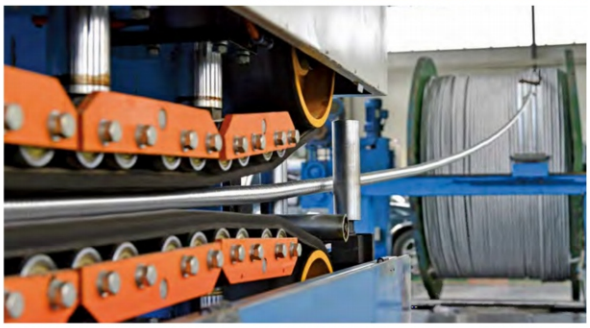
company profile













Changfeng Wire & Cable Co Ltd is one of the Top 20 Cable Manufacturer in China.

Mission and Goal for next five years

- to achieve one billion dollars revenue
- to obtain TUV PSB Singapore certificate for house wire and power cables in 2024
- to obtain kEMA certificate for medium voltage cable up to 35KV in 2024.
- To set up new cable facilities in United State and Canada.
- To increase foreign trade to 40% of the overall revenue

In 2024

A new factory is currently under construction covering an area of appro. 140,000 square meter

In 2023

Total Revenue USD2080 millions +

In 2018

Vietnam factory was setted up in Ho Chi Minh City

In 2015

Changfeng achieved (C)UL44 UL66 & UL83 & UL509 & UL854 & UL1277 & UL1569 certificates

In 2013

Changfeng achieved API (American Petroleum Institute) Certificate

In 2012

Changfeng's international trade department was inaugurated.

In 1996

Changfeng Wire & Cable Co Ltd was established in CangZhou City Hebei Province in China.

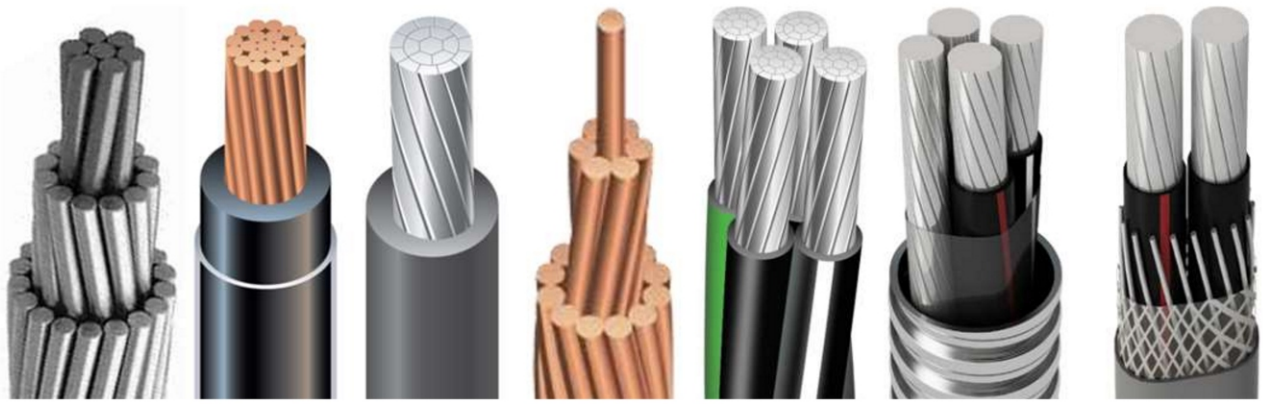
CABLES PRODUCED BY US ARE COVERED BY THE UL SOLUTIONS LISTING & SURVEILLANCE PROGRAM

CHANGFENG WIRE & CABLE CO LTD

UL FILE NUMBER	UL CCN DESCRIPTION	TYPE
E477376	Metal-clad Cable	MC
E477376	Metal-clad, Armored & TECK 90 Cable Certified for Canada	AC90, ACWU90
E477376	Cable for Use in Hazardous Locations Certified for Canada	AC90-HL, ACWU90-HL
E511884	Polymeric Materials for Use in Wire, Cable and Flexible Lighting Products - Component	XHHW,XHH,XHHW-2,RHH,RHW,RHW-2, SIS,USE,USE-2
E477375	Service-entrance Cable	SE, STYLE R, SE, STYLE U, USE-2
E490860	Bus Drop Cable	Bus Drop Cable
E493162	Fixture Wire	TFFN, TFN
E521179	Photovoltaic Wire	PV Wire
E475055	Thermoset-insulated Wire	RHH, RHW, RHW-2, SIS, XHH, XHHW, XHHW-2
E475055	Thermoset-insulated Wire Certified for Canada	R90, RW75, RW90, 5, RWU75, RWU90, SIS
E487707	Thermoplastic-insulated Wire	THHN, THHW, THW, THW-2, THWN, THWN-2, TW
E487707	Thermoplastic-insulated Wire Certified for Canada	T90 Nylon, TW, TW75, TWN75, TWU, TWU75

ICF CABLE (VIETNAM) CO LTD

UL FILE NUMBER	UL CCN DESCRIPTION	TYPE
E508224	Metal-clad Cable	MC
E508224	Metal-clad, Armored & TECK 90 Cable Certified for Canada	AC90, ACWU90
E508224	Cable for Use in Hazardous Locations Certified for Canada	AC90-HL, ACWU90-HL
E518881	Power and Control Tray Cable	TC, TC-ER
E508223	Service-entrance Cable	SE, STYLE R, SE, STYLE R, SE, STYLE U, SE, STYLE U, USE, USE-2
E523450	Bus Drop Cable	Bus Drop Cable
E527046	Photovoltaic Wire	PV Wire
E527046	Photovoltaic Cable Certified for Canada	Photovoltaic Wire (RPV), Model(s): RPV90 Photovoltaic Wire (RPVU), Model(s): RPVU90
E508221	Thermoset-insulated Wire	RHH, RHW, RHW-2, SIS, XHH, XHHW, XHHW-2
E508221	Thermoset-insulated Wire Certified for Canada	R90, RW75, RW90, RWU75, RWU90, SIS
E508222	Thermoplastic-insulated Wire	THHN, THHN, THHW, THHW, THW, THW, THW-2, THW-2, THWN, THWN, THWN-2, THWN-2, TW, TW
E508222	Thermoplastic-insulated Wire Certified for Canada	T90 Nylon, TW, TW75, TWN75, TWU, TWU75

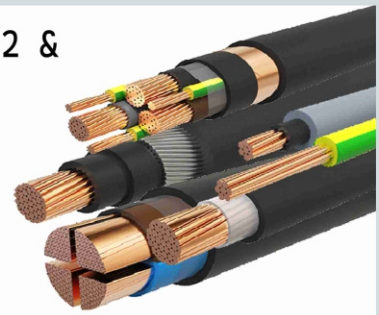


UL & CUL LISTED
WIRE AND CABLE



AS/NZS 5000.1/2 &
IEC 60502-1
POWER CABLES

TÜV SÜD PSB
SINGAPORE



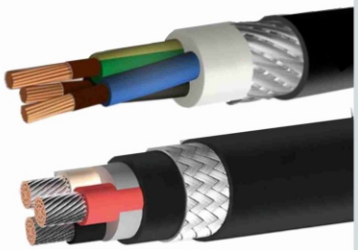
AS/NZS 1429 &
IEC 60502-2
IEC 60840
MV & HV CABLE



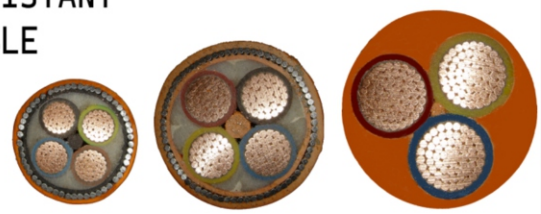
OVERHEAD
CABLE



OIL & GAS,
PETROLCHEMICAL
CABLES



FIRE
RESISTANT
CABLE



**ELECTRIC
SUBMERSIBLE
CABLE (ESP)**

API American Petroleum Institute



INSTRUMENTATION
CABLE



INDUSTRIAL
FLEXIBLE
CABLE



SOLAR
CABLE

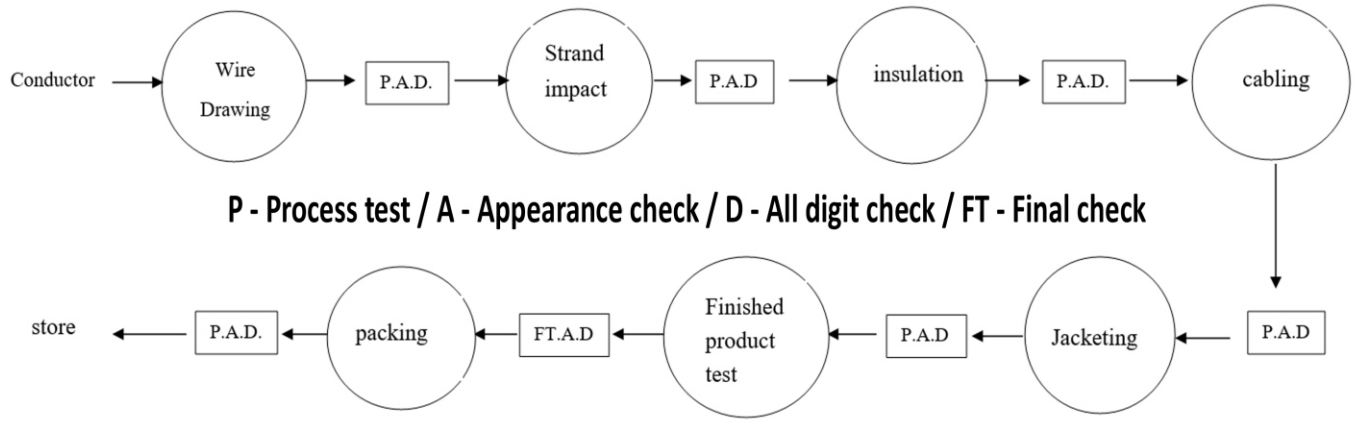
TÜVRheinland



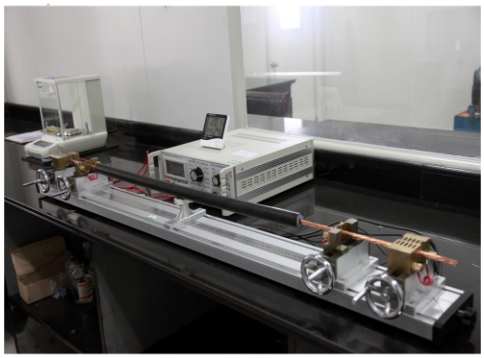
QUALITY ASSURANCE

+ The Quality Management System Conforms to ISO9001
+ The Environmental Management System Conforms to ISO14001
+ The Occupational Health & Safety Management System Conforms to ISO45001
+ Achieving Vinyl Council Australia Best Environmental Practice PVC for PVC Electrical and Power Cables

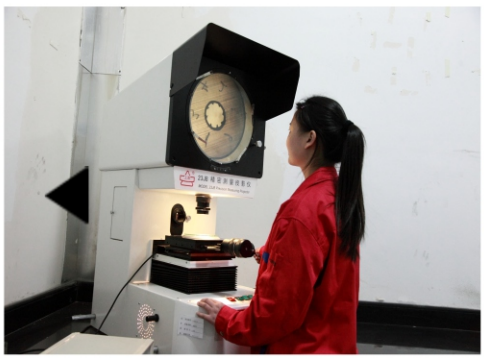
Process Test Flow Chart



P - Process test / A - Appearance check / D - All digit check / FT - Final check



Metal Conductor Resistance Testing Bridge Clamp, to determine the DC resistance of the conductors , higher the resistance, lesser the current will flow though the conductor



Measurement of insulation thickness to verify whether it is as per specified limit or not. These dimensions ensure safe and reliable performance of the cable



Flame Retardant Test to ensure the cables to reduce the spread of the fire during a fire emergency



Fire resistance test to ensure FR cales are resistance to fire alone, (950 °C ±40 °C for 3 hours)



Mechanical properties test on insulation to determine the tensile strength before ageing and after ageing

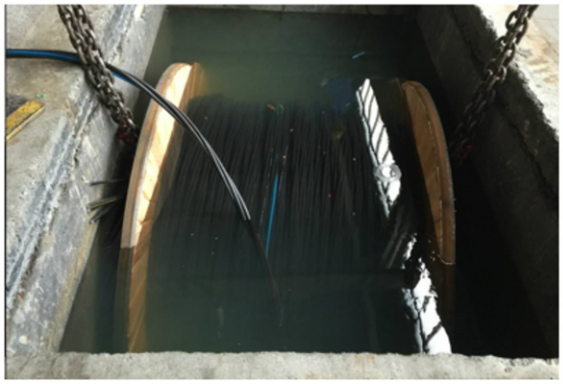


All manufactured cables are tested for withstand high voltages using the power frequency a.c., d.c.,and impulse voltage

PRESHIPMENT INSPECTION

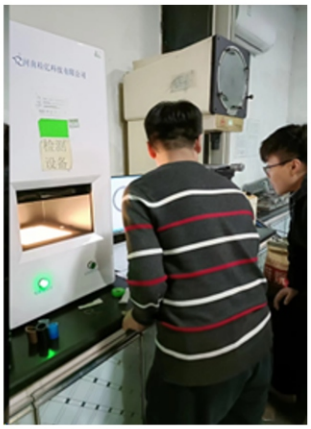


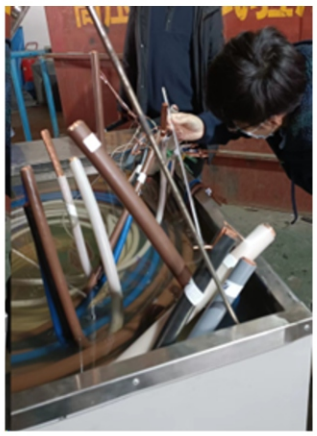




SINGAPORE TÜV SÜD PSB FACTORY INSPECTION




SGS FACTORY INSPECTION








SOLAR PROJECTS

Solar Project in Philippines
Calatagan Solar Farm(63.3MW)
Raslag Solar Power Plant(10MW)





Solar Project in America
Avra Valley Solar PV Farm in Arizona(25MW)
Alpaugh Solar PV Power Plant in California(70MW)

Desoto Next Generation Solar Energy Center in Florida(25MW)

El Dorado And Copper Mountain Solar PV Power Plant in Nevada(58MW)

Solar Projects in Japan
Ashikita Solar Power Plant(21.52MW)
Miyagi PV Plant(26MW)
Nishiura Power Plant(2.4MW)





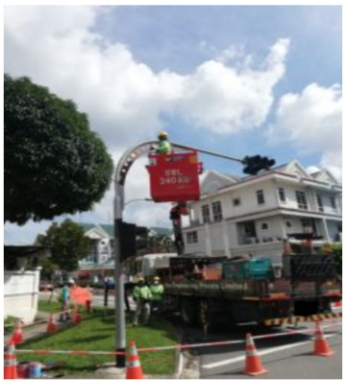
Solar Projects in Australia
Collinsville Solar Power Station (42MW)
Longreach Solar Farm (15MW)
Dubbo Solar Hub (24.2MW)
Manildra Solar Farm (42.5MW)
Whitsunday Solar Farm (57.5MW)

Supplied transmission cable to Philippines Transmission Line Projects











Cables Supplied to SingaporeTraffic Signal installation & maintenance

Supplied high temperature Low Smoke Halogen Free control panel wires to Singapore Mass Rapid Transit stations









Supplied shielded control cables in Singapore sub-station

Supplied DC power flexible cable and high temperature EPDM cable to Malaysia JH1Data centre





LOW VOLTAGE 600/1000V
AERIAL BUNDLED CABLE SELF-SUPPORT TYPE

Application

The aerial bundled cables designed for overhead distribution lines have all conductors made of aluminium and are insulated with XLPE Phase and neutral cores are laid up in a bundle with a left hand lay.

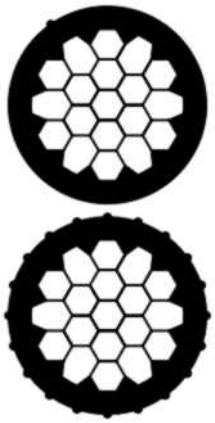
Construction :

Conductor :	Compact round stranded AAC Aluminum (for both phase and neutral)
Insulation :	XLPE (Cross-linked Polyethylene) Black
Core Identification:	Each phase core is marked with numerals and letters 1 ONE , 2 TWO or 3 THREE and with one rib, two ribs, three ribs to denote the phases. The neutral core carries equally spaced ribs right round the circumference.

Technical Data :

Voltage :	0.6/1.0(1.2) kV
Reference :	IEC 60502-1 ; AS/NZS3560.1
AC Testing Voltage :	3500V
Max. Conductor Temperature :	90°C (normal operation)
Max. Conductor Temperature :	250°C (short circuit at 5s max. duration)
Special Properties upon request :	UV Resistant

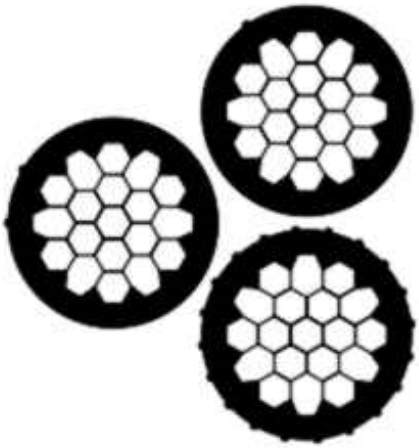
LOW VOLTAGE 600/1000V
AERIAL BUNDLED CABLE SELF-SUPPORT TYPE



2 Cores
CU/XLPE

Nominal cross-sectional area of conductor Core x mm^2	Min. Average Thickness of insulation mm	Max. Diameter for complete cable mm	Approx weight for complete cable Kg/km	Maximum Conductor Resistance at 20°C Ohm/km	Min Breaking Load KN
2 x 16	1.3	15.8	140	1.91	4.4
2 x 25	1.3	18.4	200	1.2	7.0
2 x 35	1.3	20.6	260	0.868	9.8
2 x 50	1.5	23.8	350	0.641	14.0
2 x 70	1.5	27.2	480	0.443	19.6
2 x 95	1.7	31.8	680	0.32	26.6
2 x 120	1.7	35.0	830	0.253	33.6
2 x 150	1.7	37.8	1010	0.206	42.0

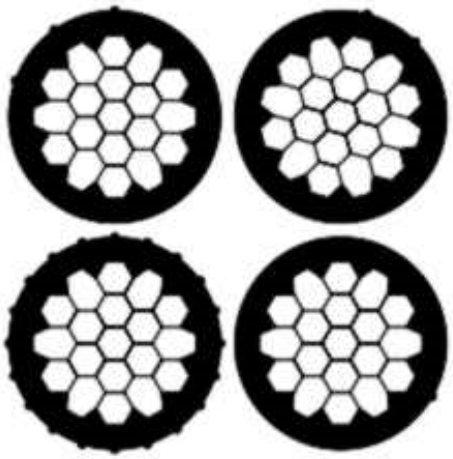
LOW VOLTAGE 600/1000V
AERIAL BUNDLED CABLE SELF-SUPPORT TYPE



3 Cores
CU/XLPE

Nominal cross-sectional area of conductor Core x mm^2	Min. Average Thickness of insulation mm	Max. Diameter for complete cable mm	Approx weight for complete cable Kg/km	Maximum Conductor Resistance at 20°C Ohm/km	Min Breaking Load KN
3 x 16	1.3	17.1	210	1.91	6.6
3 x 25	1.3	19.9	300	1.2	10.5
3 x 35	1.3	22.2	390	0.868	14.7
3 x 50	1.5	25.7	530	0.641	21.0
3 x 70	1.5	29.4	720	0.443	29.4
3 x 95	1.7	34.3	1010	0.32	39.9
3 x 120	1.7	37.8	1250	0.253	50.4
3 x 150	1.7	40.8	1520	0.206	63.0

LOW VOLTAGE 600/1000V
AERIAL BUNDLED CABLE SELF-SUPPORT TYPE



4 cores
CU/XLPE

Nominal cross-sectional area of conductor Core x mm^2	Min. Average Thickness of insulation mm	Max. Diameter for complete cable mm	Approx weight for complete cable Kg/km	Maximum Conductor Resistance at 20°C Ohm/km	Min Breaking Load KN
4 x 16	1.3	19.1	280	1.91	8.8
4 x 25	1.3	22.2	400	1.2	14.0
4 x 35	1.3	24.9	520	0.868	19.6
4 x 50	1.5	28.7	700	0.641	28.0
4 x 70	1.5	32.8	960	0.443	39.2
4 x 95	1.7	38.4	1350	0.32	53.2
4 x 120	1.7	42.2	1660	0.253	67.2
4 x 150	1.7	45.6	2020	0.206	84.0

SINGLE & MULTI-CORES ALUMINUM CABLES 600/1000V, XLPE INSULATED, PVC SHEATHED UNARMOURED & ARMOURED

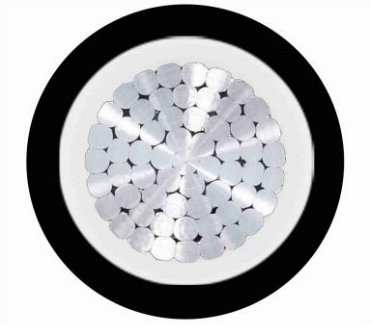
APPLICATION

Power Cables for electricity supply are installed in open air, underground, in cable ducts, outdoor and indoors, power stations, for industry and distribution boards as well as in subscriber networks where mechanical damages are not to be expected. The cables are suitable for continuous operation at a maximum conductor temperature of 90°C.

Conductor :	Circular stranded, circular compact stranded plain annealed Aluminum wire acc. To IEC 60228, BS 6360 class 2
Insulation :	XLPE (Cross-linked Polyethylene)
Identification of cores:	1 core – Natural 2 cores - Red, black 3 cores – Red, Yellow , Blue 4 cores – Red, Yellow, Blue, Black
Laying Up:	Cores stranded together. Where necessary, binder tapes and non-hygroscopic fillers may be applied
***applicable to armoured cable**	
Bedding:	Extruded Black PVC (polyvinyl chloride) Compound
Colour:	Black
***applicable to armoured cable**	
Armour :	Single Core – consist of a single layer of non-Magnetic material, such as aluminum wire (AWA) or aluminum tape (DATA) . Two core and above – consist of a single Layer of galvanized steel wires (SWA) or steel tapes (DSTA)
Sheath :	PVC (Polyvinyl Chloride) compound type ST2
Colour:	Black

Voltage :	600/1000V
Temperature :	Maximum 90°C
Main Specification :	IEC 60502-1
Testing Voltage :	3500V
Min. Bending Radius :	10 × Overall Diameter
Special Properties Upon Request :	Anti-Termite sheath Anti-Rodent sheath UV-Resistant sheath Flame Retardant sheath

SINGLE CORE ALUMINUM CABLES
600/1000V, XLPE INSULATED, PVC SHEATHED
UNARMOURED & ARMOURED



CU/XLPE/PVC
UNARMOURED



CU/XLPE/PVC/AWA/PVC
ARMOURED



CU/XLPE/PVC/DATA/PVC
ARMOURED

Nominal cross-sectional area of conductor	Approx. Overall Diameter of Cable			Approx. Weight of Cable		
	Unarmoured	Armoured AWA	Armoured DATA	Unarmoured	Armoured AWA	Armoured DATA
Core x sqmm	mm	mm	mm	Kg/Km	Kg/Km	Kg/Km
1x16	10	14	14	110	250	230
1x25	11	16	16	150	310	290
1x35	12	17	17	180	360	340
1x50	14	18	18	230	430	410
1x70	16	20	20	310	530	520
1x95	18	22	22	410	640	640
1x120	19	25	23	480	860	740
1x150	21	27	25	600	980	860
1x185	23	29	27	740	1140	1020
1x240	26	32	30	940	1390	1240
1x300	29	34	33	1140	1640	1480
1x400	32	39	36	1450	2140	1860
1x500	36	43	42	1820	2580	2280
1x630	42	49		2450	3480	
1x800	46	54		3070	4230	
1x1000	51	59		3810	4980	

TWO CORES ALUMINUM CABLES
600/1000V, XLPE INSULATED, PVC SHEATHED
UNARMOURED & ARMOURED



CU/XLPE/PVC
UNARMOURED



CU/XLPE/PVC/SWA/PVC
ARMOURED



CU/XLPE/PVC/DSTA/PVC
ARMOURED

Nominal cross-sectional area of conductor	Approx. Overall Diameter of Cable			Approx. Weight of Cable		
	Unarmoured	Armoured SWA	Armoured DSTA	Unarmoured	Armoured SWA	Armoured DSTA
Core x sqmm	mm	mm	mm	Kg/Km	Kg/Km	Kg/Km
2x16	17	21	21	270	740	460
2x25	21	26	24	380	1080	620
2x35	23	28	26	470	1240	730
2x50	26	31	29	610	1480	900
2x70	29	35	33	800	1840	1150
2x95	33	40	37	1040	2500	1460
2x120	37	43	43	1280	2870	2130
2x150	41	47	47	1580	3320	2520
2x185	45	53	52	1940	4410	3040
2x240	51	59	58	2500	5240	3740
2x300	57	65	63	3030	6110	4450
2x400	63	71	70	3900	7380	5510

THREE CORES ALUMINUM CABLES
600/1000V, XLPE INSULATED, PVC SHEATHED
UNARMOURED & ARMOURED



CU/XLPE/PVC
UNARMOURED



CU/XLPE/PVC/SWA/PVC
ARMOURED



CU/XLPE/PVC/DSTA/PVC
ARMOURED

Nominal cross-sectional area of conductor	Approx. Overall Diameter of Cable			Approx. Weight of Cable		
	Unarmoured	Armoured SWA	Armoured DSTA	Unarmoured	Armoured SWA	Armoured DSTA
Core x sqmm	mm	mm	mm	Kg/Km	Kg/Km	Kg/Km
3x16	18	22	22	330	820	550
3x25	22	27	25	470	1220	730
3x35	24	30	28	590	1440	870
3x50	27	32	31	760	1700	1080
3x70	32	37	35	1040	2440	1440
3x95	36	42	41	1340	2890	2180
3x120	39	46	45	1660	3340	2590
3x150	44	52	50	2040	4400	3120
3x185	49	56	55	2520	5120	3710
3x240	55	63	61	3220	6250	4650
3x300	61	69	67	3980	7280	5520
3x400	68	76	75	5080	8780	6820

THREE CORES WITH REDUCED NEUTRAL ALUMINUM CABLES 600/1000V, XLPE INSULATED, PVC SHEATHED UNARMOURED & ARMOURED



CU/XLPE/PVC UNARMOURED



CU/XLPE/PVC/SWA/PVC ARMOURED



CU/XLPE/PVC/DSTA/PVC ARMOURED

Nominal cross-sectional area of conductor	Approx. Overall Diameter of Cable			Approx. Weight of Cable		
	Unarmoured	Armoured SWA	Armoured DSTA	Unarmoured	Armoured SWA	Armoured DSTA
Core x sqmm	mm	mm	mm	Kg/Km	Kg/Km	Kg/Km
3x16+10	17.5	22.4	20.3	336	849	577
3x25+16	20.9	26.5	23.7	482	1244	768
3x35+16	22.8	28.4	25.6	573	1407	884
3x50+25	26.2	32.0	29.0	779	1737	1135
3x70+35	30.5	37.7	33.9	1078	2482	1540
3x95+50	35.7	41.5	38.9	1508	2981	2388
3x120+70	38.8	46.4	43.4	1789	3558	2894
3x150+70	42.5	51.3	47.3	2154	4549	3404
3x185+95	47.6	56.5	52.6	2674	5345	4070
3x240+120	53.5	62.9	58.9	3424	6468	5047
3x300+150	59.6	69.2	64.8	4300	7654	6072
3x400+240	69.1	80.6	74.7	5674	10557	7791

FOUR CORES ALUMINUM CABLES
600/1000V, XLPE INSULATED, PVC SHEATHED
UNARMOURED & ARMOURED



CU/XLPE/PVC
UNARMOURED



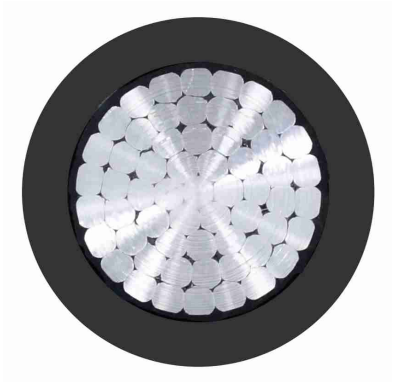
CU/XLPE/PVC/SWA/PVC
ARMOURED



CU/XLPE/PVC/DSTA/PVC
ARMOURED

Nominal cross-sectional area of conductor	Approx. Overall Diameter of Cable			Approx. Weight of Cable		
	Unarmoured	Armoured SWA	Armoured DSTA	Unarmoured	Armoured SWA	Armoured DSTA
Core x sqmm	mm	mm	mm	Kg/Km	Kg/Km	Kg/Km
4x16	20	24	23	390	1060	620
4x25	24	29	27	570	1380	850
4x35	27	32	30	720	1640	1040
4x50	30	35	33	940	2070	1330
4x70	35	41	39	1280	2800	1730
4x95	39	46	45	1670	3370	2630
4x120	44	52	50	2070	4430	3190
4x150	49	56	55	2520	5130	3760
4x185	54	62	60	3160	6120	4590
4x240	61	69	68	4030	7360	5620
4x300	68	76	74	4970	8630	6730
4x400	76	85	83	6370	11550	8440

MEDIUM VOLTAGE XLPE PARTIAL INSUALTED CABLE FOR OVERHEAD LINES



Application

Used for medium voltage overhead transmission line.

Construction :

Conductor :	Compact round stranded AAC Aluminum
Conductor Screen :	Semi-conducting Cross-linked polyethylene
Insulation :	XLPE (Cross-linked Polyethylene) Black

Technical Data :

Voltage :	12/20(24) kV
Reference :	IEC 60228 & IEC 60502-2
AC Testing Voltage :	30kV/5mins
Max. Conductor Temperature :	90°C (normal operation)
Max. Conductor Temperature :	250°C (short circuit at 5s max. duration)
Special Properties upon request :	UV Resistant

Nominal cross-sectional area of conductor Core x mm^2	Thickness of insulation mm	Approx overall diameter mm	Approx net weight Kg/km	Maximum Conductor Resistance at 20°C Ohm/km	Min Breaking Load KN
1 x 50	3.5	16	260	0.641	14.7
1 x 70	3.5	17	330	0.443	20.6
1 x 95	3.5	19	420	0.320	27.9
1 x 120	3.5	21	500	0.253	35.3
1 x 150	3.5	22	580	0.206	44.1
1 x 185	3.5	24	700	0.164	54.4
1 x 240	3.5	26	880	0.125	70.6



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