



**PT SUPREME CABLE**  
MANUFACTURING & COMMERCE Tbk.  
( PT SUCACO Tbk. )



The patented ACCC Smart Conductor is superior to existing conductors in a number of key performance areas including :

- Up to double the current carrying capacity of ACSR
- Substantially reduces high temperature sag
- Requires fewer structures for new line construction
- Increases capacity of existing rights of way and structures through retrofiting
- Eliminates bimetallic corrosion
- Significantly reduces line losses compared to same diameter conventional and composite conductors at equal operating temperatures

# ACCC<sup>®</sup>

**Aluminium Conductor Composite Core  
/ Trapezoidal Wire**

## Product Catalogue

**CTC GLOBAL**

◇ LMK ◇

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/ Trapezoidal Wire**

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SIZE CODE NAME	Cross Section Area mm <sup>2</sup>	No. of Aluminium TW wire pcs	Diameter of Conductor mm	Weight Approx. kg/km	Maximum DC Resistance at 20°C Ω/km	Current Carrying Capacity A	Minimum Breaking strength kN
HELSINKI	160	16	15.65	477	0.1861	792	68.1
COPENHAGEN	220	16	18.29	668	0.1279	1008	72
LISBON	310	16	21.78	955	0.0888	1285	102.7
AMSTERDAM	360	20	23.55	1114	0.0761	1426	121.7
BRUSSELS	415	20	25.14	1274	0.0673	1552	134.5
STOCKHOLM	460	20	26.40	1394	0.0612	1655	181.2
WARSAW	510	22	27.72	1539	0.0556	1766	157.6
DUBLIN	520	22	28.15	1594	0.0441	1800	181.2
HAMBURG	550	22	28.63	1657	0.0513	1858	159.7
MAHAKAM ULS	545	22	29.01	1666	0.0526	1785	255.7

The above value may vary depending on ACCC® Conductor AMP'S capabilities, but shall not exceed the tolerance requirements stated in EN 50540 for diameter, cross-sectional area of aluminium wires and the weight of conductors from guaranteed value show above.

#### Condition of Current Carrying Capacity Calculation

Conductivity of Aluminium : 63 %

Ambient Temperature : 35 °C

Wind Velocity : 0.6 m/s

Solar Radiation : 0.1 W/cm<sup>2</sup>

Radiation Factor : 0.9

Continuous Operating Temperature : 175 °C

#### Additional benefits of composite vs steel reinforced conductor are :

##### • Reduced Sag

ACCC experiences less sag than the traditional ACSR distribution lines due to its lighter weight and higher temperature tolerance. ACCC is tolerant up to 150 degrees Celcius continous use, reducing heat-induced sag in periods of peak demand.

Reducing sag is a key factor in increasing ampacity during the transmission process.

##### • Lower Resistance & Greater Ampacity

Engineered from non-metallic materials, ACCC does not suffer from inductive interference like ACSR and ACSS. This reduced interference lowers line losses, significantly leading to more electricity delivered or lower power generation needed. By using pre-annealed trapezoidal shaped aluminium strands, ACCC conductors have 28 percent more aluminium in comparable sized conductors, allowing for significantly more ampacity to be delivered in the same transmission corridor or on a per line basis.

##### • Durability

Engineered from non-metallic materials, ACCC is not affected by corrosion, a typical problem with conventional transmission cables. Salt, air pollution and galvanic corrosion from metal on metal contact all play a role in weakening traditional steel cores over time. Our world class production team has consistently produced results that dwarf our competitors and set new standards for quality.

##### • Tensile and Flexural Strength

Unlike some composite conductors, the composite core of a ACCC line is not brittle or fragile. Consequently, they can be wound around standard reels (with appropriate bend radius) and handled by workers and linesmen without the need to employ special handling procedures for installation and can be pulled to the appropriate tension with a standard pulley system. Based on published results, ACCC is the strongest conductor available in the market.

##### • Cost Efficiency

ACCC exhibits less sag, so they can cover much greater spans than other cables pulled to the same tension. As a result, fewer poles and towers are required in the design of ACCC lines, which along with lower line losses, reduces costs for both distribution companies and consumers.

