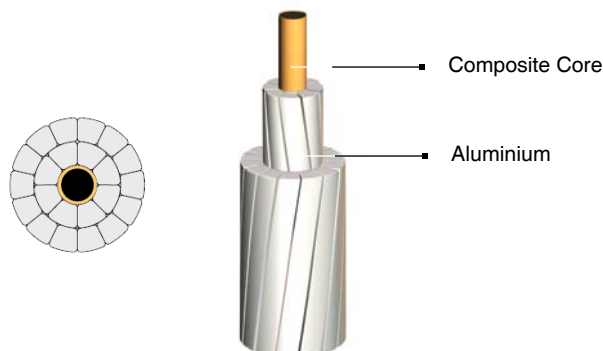


# ACCC/TW

(Aluminium Conductor Composite Core / Trapezoidal Wires)

Standard Specification : ASTM B 857, ASTM B 609, Manufacturer Specification



## Mechanical Properties

Type	Size (mm <sup>2</sup> )	Stranding		Nominal Diameter (mm)		Cross Sectional Area (mm <sup>2</sup> )		Nominal Weight (kg/km)			Rated Strength (kN) min.
		No. of Al Layers	No. of Al Wires	Total	Core	Total	Al	Total	Al	Core	
Helsinki	160	2	16	15.65	5.97	180.9	152.9	480	426	54	64.0
Copenhagen	220	2	16	18.29	5.97	251.0	223.0	670	616	54	65.6
Lisbon	310	2	16	21.78	7.11	358.4	318.7	957	881	76	93.2
Amsterdam	360	2	20	23.55	7.75	418.5	371.3	1,113	1,026	87	110.6
Brussels	415	2	20	25.14	8.13	477.2	425.3	1,275	1,177	98	122.1
Stockholm	460	2	20	26.40	8.76	527.5	467.2	1,406	1,293	113	141.1
Warsaw	510	2	22	27.72	8.76	574.9	514.6	1,539	1,426	113	142.3
Dublin	520	2	22	28.15	9.53	594.8	523.5	1,559	1,427	132	166.4
Hamburg	550	2	22	28.62	8.76	613.8	553.5	1,646	1,533	113	143.2

Note : • Thermal Expansion (CTE/1°C)  
 - Aluminium :  $23 \times 10^{-6}$   
 - Core :  $1.61 \times 10^{-6}$   
 • Modulus Elasticity  
 - Aluminium : 69 Gpa  
 - Core : 117 Gpa

• Standard Packing Length : 2000 m

## Electrical Properties

Type	Size (mm <sup>2</sup> )	Resistance Values (Ω/km)		Current Carrying Capacity* (A)	Inductive Reactance at 50 Hz for 1 feet radius (Ω/km)	Capacitive Reactance at 50 Hz for 1 feet radius (MΩ.km)
		DC	@ 20°C			
Helsinki	160	0.1861		775	0.246	0.210
Copenhagen	220	0.1279		986	0.236	0.201
Lisbon	310	0.0896		1,250	0.225	0.191
Amsterdam	360	0.0769		1,386	0.220	0.186
Brussels	415	0.0673		1,515	0.216	0.183
Stockholm	460	0.0612		1,616	0.213	0.180
Warsaw	510	0.0556		1,723	0.210	0.177
Dublin	520	0.0541		1,756	0.209	0.176
Hamburg	550	0.0517		1,806	0.208	0.175

\* 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