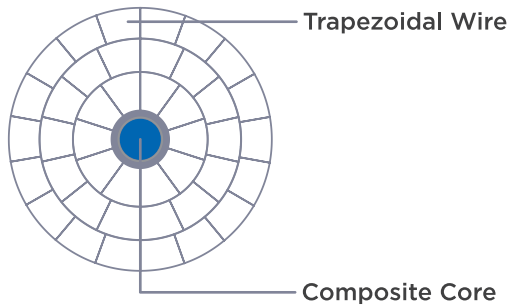


STER-ACCC™

Sterlite Aluminium Conductor Composite Core (ACCC) conductor consists of a hybrid carbon and glass fiber core which is wrapped with trapezoidal shaped aluminium strands. The high strength structural core carries most of the conductor's mechanical load, while the fully annealed aluminium strands carry all of the conductor's electrical current. ACCC conductor's composite core is much lighter and stronger than conventional or high-strength steel core.



APPLICATION

Ideal for Reconductoring

- Increase capacity while improving line clearance and losses.
- Reduce strain on structures increasing life.

Reduced Line Losses in New Lines

- Under equal load conditions reduces line losses by 30%-40% compared to conductors of the same diameter and weight.
- 100% more capacity building towards future demands.

BENEFITS

- With 28% more annealed aluminium in a trapezoidal configuration the ACCC conductor of the same diameter as ACSR, can double the current (ampacity) rating; Higher operating efficiency reduces line losses and associated emissions by more than 35%, resulting in more power delivered and lower power generation costs.
- ACCC conductors use a patented carbon/glass/thermoset resin core that provides high strength and reduces height temperature sag.
- Can re-conductor existing pathway without structural modification and reduce capital expenses on new lines.
- Uses conventional installation methods, tools and mostly conventional hardware. Requires no special tools and limited special training.
- Resists environmental degradation—will not rust, corrode or cause electrolysis with aluminium conductors and components.

TECHNICAL SPECIFICATIONS

| PROPERTIES | ACCC HELSINKI | | ACCC LISBON | |
|--|------------------------|------------------------|------------------------|------------------------|
| Typical factors | 5.97 mm | 0.2355 in | 7.11 mm | 0.2799 in |
| Reference specifications | ASTM B857, ASTM B609 | | ASTM B857, ASTM B609 | |
| Total cross section area | 176.11 mm ² | 0.2730 in ² | 358.40 mm ² | 0.5555 in ² |
| Conductive wire | 1350 O temper Al | | 1350 O temper Al | |
| Core wire | Composite Core | | Composite Core | |
| Conductor diameter | 15.65 mm | 0.6161 in | 21.78 mm | 0.8575 in |
| Weight | 455 kg/km | 305.7 lbs/mile | 957 kg/km | 642.8 lbs/mile |
| Ultimate tensile strength | 7036 kg | 15511.71 lbs | 10574 kg | 23311.65 lbs |
| DC resistance at 20°C temperature | 0.19 Ω/km | 0.30 Ω/mile | 0.09 Ω/km | 0.14 Ω/mile |
| Maximum operating temperature | 175°C | 347°F | 175°C | 347°F |
| Current carrying capacity at maximum operating temperature | 710 Amp | | 1079 Amp | |

| PROPERTIES | ACCC COPENHAGEN | | ACCC DRAKE | |
|--|------------------------|------------------------|------------------------|------------------------|
| Typical factors | 5.97 mm | 0.2350 in | 9.53 mm | 0.3752 in |
| Reference specifications | ASTM B857, ASTM B609 | | ASTM B857, ASTM B609 | |
| Total cross section area | 246.57 mm ² | 0.3822 in ² | 588.30 mm ² | 0.9119 in ² |
| Conductive wire | 1350 O temper Al | | 1350 O temper Al | |
| Core wire | Composite Core | | Composite Core | |
| Conductor diameter | 18.30 mm | 0.7205 in | 28.14 mm | 1.1079 in |
| Weight | 657 kg/km | 441.5 lbs/mile | 1558 kg/km | 1046.9 lbs/mile |
| Ultimate tensile strength | 7443.9 kg | 16410.97 lbs | 18691 kg | 41206.55 lbs |
| DC resistance at 20°C temperature | 0.13 Ω/km | 0.21 Ω/mile | 0.06 Ω/km | 0.09 Ω/mile |
| Maximum operating temperature | 175°C | 347°F | 175°C | 347°F |
| Current carrying capacity at maximum operating temperature | 858 Amp | | 1484 Amp | |

Assumptions: Ampacity is calculated based on, 45°C (113°F) ambient temperature, 0.6 m/s wind velocity, 0.5 as coefficient of solar absorption, 0.6 as coefficient of emmissivity and 1200 wt/sqm coefficient for solar radiation, at sea level.