# Concentric Lay Stranded Trapezoidal Conductor: LINNET

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal equivalent Aluminum Area</strong></td>
<td>449.2 kcmil</td>
</tr>
<tr>
<td><strong>Cross Sectional Area - Aluminum</strong></td>
<td>435.48 kcmil</td>
</tr>
<tr>
<td><strong>Cross Sectional Area - CTC Core</strong></td>
<td>0.043 sq.in</td>
</tr>
<tr>
<td><strong>Total Area of Cross Section- conductor</strong></td>
<td>0.385 sq.in</td>
</tr>
<tr>
<td><strong>Overall Diameter of Conductor</strong></td>
<td>0.72 in</td>
</tr>
<tr>
<td><strong>Mass per Unit length - Aluminum</strong></td>
<td>410 lb/kft</td>
</tr>
<tr>
<td><strong>Mass per Unit length - Core</strong></td>
<td>36 lb/kft</td>
</tr>
<tr>
<td><strong>Mass per unit length - Conductor</strong></td>
<td>446 lb/kft</td>
</tr>
<tr>
<td><strong>Rated Strength of the Conductor</strong></td>
<td>16370 lbf</td>
</tr>
<tr>
<td><strong>Maximum DC Resistance at 20°C (68°F)</strong></td>
<td>0.2073 Ω/mile</td>
</tr>
<tr>
<td><strong>Lay ratio - Outer layer of Aluminum wires</strong></td>
<td>Min.10 Max.13</td>
</tr>
<tr>
<td><strong>- Inner layer of Aluminum wires</strong></td>
<td>Min.10 Max.16</td>
</tr>
<tr>
<td><strong>Preferred Lay of outer layer</strong></td>
<td>7.921 in</td>
</tr>
<tr>
<td><strong>Stranding configuration</strong></td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>1 x 0.235 in</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>2 N°</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>8 x 0.142 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia.of Trapezoidal wires in second layer</td>
<td>12 x 0.151 in</td>
</tr>
<tr>
<td><strong>Rated Breaking Load</strong></td>
<td>13579 lbf</td>
</tr>
<tr>
<td><strong>Inductive Reactance @1ft. radius at 60Hz</strong></td>
<td>0.456 Ω/mile</td>
</tr>
<tr>
<td><strong>Capacitive Reactance @1ft. radius at 60Hz</strong></td>
<td>0 haulm</td>
</tr>
<tr>
<td><strong>General Specification Standard</strong>: ASTM B 857</td>
<td></td>
</tr>
<tr>
<td><strong>Document version</strong>: Preliminary</td>
<td></td>
</tr>
</tbody>
</table>

*Extreme Load Safety Strength of Conductor = 14700 lbf*   
(Where applicable to 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-75S-001.)
## Concentric Lay Stranded Trapezoidal Conductor: HAWK

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>630.2 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - Aluminum</td>
<td>610.94 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - CTC Core</td>
<td>0.062 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section - Conductor</td>
<td>0.541 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>0.857 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>575 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>51 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>626 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor</td>
<td>23205 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.1477 Ω/mile</td>
</tr>
<tr>
<td>Lay ratio - Outer layer of Aluminum wires</td>
<td>Min. 10 Max. 13</td>
</tr>
<tr>
<td>Lay Direction of outer layer</td>
<td>Right Hand</td>
</tr>
<tr>
<td>Lay Direction of inner layer</td>
<td>Standard or Non Specular</td>
</tr>
<tr>
<td>Preferred Lay of outer layer</td>
<td>9.432 in</td>
</tr>
<tr>
<td>Surface finish</td>
<td>Standard or Non Specular</td>
</tr>
<tr>
<td>Max. single length /Drum</td>
<td>8010 ft (2440 m)</td>
</tr>
<tr>
<td>Stranding configuration</td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>1 x 0.2799 in</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>2°</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>6 x 0.195 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in second layer</td>
<td>10 x 0.196 in</td>
</tr>
<tr>
<td>Individual Aluminum wires</td>
<td>63 %IACS</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>8.5 ksi</td>
</tr>
<tr>
<td>Composite Core</td>
<td>Nil</td>
</tr>
<tr>
<td>Composite Core conductivity</td>
<td></td>
</tr>
<tr>
<td>Composite Core Rated Breaking Load</td>
<td>19290 lbf</td>
</tr>
<tr>
<td>Coefficient of thermal expansion above thermal knee point</td>
<td>1.61 x 10⁻⁶/°C</td>
</tr>
<tr>
<td>Coefficient of thermal expansion below thermal knee point</td>
<td>19.09 x 10⁻⁶/°C</td>
</tr>
<tr>
<td>Maximum allowable continuous operating temp. (surface)</td>
<td>175°C (347°F)</td>
</tr>
<tr>
<td>Rated ampacity at max. temperature ^</td>
<td>1197 Amp.</td>
</tr>
<tr>
<td>AC Resistance at max. operating temp.</td>
<td>0.2406 Ω/mile</td>
</tr>
<tr>
<td>Calculated max. ampacity at 120 Deg.C ^</td>
<td>1006 Amp.</td>
</tr>
<tr>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>0.20793 Ω/mile</td>
</tr>
<tr>
<td>Geometric Mean Radius (GMR)</td>
<td>0.334 in</td>
</tr>
<tr>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.6348 Ω/mile</td>
</tr>
<tr>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>0.09877 MΩ/mile</td>
</tr>
<tr>
<td>^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 &amp; absorptivity: 0.5</td>
<td></td>
</tr>
<tr>
<td>Modulus of elasticity above thermal knee point</td>
<td>17.2 Msi</td>
</tr>
<tr>
<td>Modulus of elasticity below thermal knee point</td>
<td>10.7 Msi</td>
</tr>
</tbody>
</table>

* Extreme Load Safety Strength of Conductor =20860 lbf
( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)

Manufactured under license from CTC Cable Corporation.
### Concentric Lay Stranded Trapezoidal Conductor : DOVE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>743.26 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - Aluminum</td>
<td>720.56 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - CTC Core</td>
<td>0.073 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section- conductor</td>
<td>0.639 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>0.927 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>678 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>58 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>736 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor *</td>
<td>27504 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.1253 Ω/mile</td>
</tr>
<tr>
<td>Lay ratio - Outer layer of Aluminum wires : Min.10 Max. 13</td>
<td>Lay Direction of outer layer Right Hand</td>
</tr>
<tr>
<td>- Inner layer of Aluminum wires : Min.10 Max. 16</td>
<td>Surface finish Standard or Non Specular</td>
</tr>
<tr>
<td>Preferred Lay of outer layer</td>
<td>Max. single length /Drum 7480 ft (2280 m)</td>
</tr>
<tr>
<td>Stranding configuration</td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>1 x 0.3051 in</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>2º</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>7 x 0.196 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in second layer</td>
<td>11 x 0.203 in</td>
</tr>
<tr>
<td>Individual Aluminum wires</td>
<td></td>
</tr>
<tr>
<td>Minimum conductivity</td>
<td>63 %IACS</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>8.5 ksi</td>
</tr>
<tr>
<td>Composite Core</td>
<td></td>
</tr>
<tr>
<td>Conductivity</td>
<td>Nil</td>
</tr>
<tr>
<td>Rated Breaking Load</td>
<td>22887 lbf</td>
</tr>
<tr>
<td>Coefficient of thermal expansion</td>
<td></td>
</tr>
<tr>
<td>above thermal knee point</td>
<td>1.61 x10⁻⁶/°C</td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>19.07 x10⁻⁶/°C</td>
</tr>
<tr>
<td>Max. allowable continuous operating temp. (surface)</td>
<td>175 °C (347°F)</td>
</tr>
<tr>
<td>Rated ampacity at max. temperature ^</td>
<td>1333 Amp.</td>
</tr>
<tr>
<td>AC Resistance at max. operating temp.</td>
<td>0.2042 Ω/mile</td>
</tr>
<tr>
<td>Calculated max. ampacity at 120 Deg.C ^</td>
<td>1119 Amp.</td>
</tr>
<tr>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>0.17649 Ω/mile</td>
</tr>
<tr>
<td>Geometric Mean Radius(GMR)</td>
<td>0.361 in</td>
</tr>
<tr>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.42532 Ω/mile</td>
</tr>
<tr>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>0.09646 MΩ/mile</td>
</tr>
<tr>
<td>^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 &amp; absorptivity: 0.5</td>
<td></td>
</tr>
</tbody>
</table>

* Extreme Load Safety Strength of Conductor =24730 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)

General Specification Standard : ASTM B 857

Document version : Preliminary
## Concentric Lay Stranded Trapezoidal Conductor: GROSBEAK

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>850.54 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - Aluminum</td>
<td>824.56 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - CTC Core</td>
<td>0.08 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section - conductor</td>
<td>0.728 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>0.99 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>776 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>66 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>842 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor *</td>
<td>30487 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.1095 Ω/mile</td>
</tr>
<tr>
<td>Lay ratio - Outer layer of Aluminum wires : Min.10 Max.13</td>
<td></td>
</tr>
<tr>
<td>- Inner layer of Aluminum wires : Min.10 Max.16</td>
<td></td>
</tr>
<tr>
<td>Prefered Lay of outer layer</td>
<td>10.887 in</td>
</tr>
<tr>
<td>Lay Direction of outer layer</td>
<td>Right Hand</td>
</tr>
<tr>
<td>Surface finish</td>
<td>Standard or Non Specular</td>
</tr>
<tr>
<td>Max. single length /Drum</td>
<td>6990 ft (2130 m)</td>
</tr>
<tr>
<td>Stranding configuration</td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>1 x 0.3201 in</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>2 N°</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>7 x 0.209 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia.of Trapezoidal wires in second layer</td>
<td>12 x 0.208 in</td>
</tr>
<tr>
<td>Individual Aluminum wires</td>
<td></td>
</tr>
<tr>
<td>Minimum conductivity</td>
<td>63 %IACS</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>8.5 ksi</td>
</tr>
<tr>
<td>Composite Core</td>
<td></td>
</tr>
<tr>
<td>Conductivity</td>
<td>Nil</td>
</tr>
<tr>
<td>Rated Breaking Load</td>
<td>25202 lbf</td>
</tr>
<tr>
<td>Coefficient of thermal expansion above thermal knee point</td>
<td>1.61 x10^-6 /°C</td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>19.19 x10^-6 /°C</td>
</tr>
<tr>
<td>Modulus of elasticity above thermal knee point</td>
<td>17.2 Msi</td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>10.67 Msi</td>
</tr>
<tr>
<td>Max. allowable continuous operating temp. (surface)</td>
<td>175 °C (347°F)</td>
</tr>
<tr>
<td>Rated ampacity at max. temperature ^</td>
<td>1457 Amp.</td>
</tr>
<tr>
<td>AC Resistance at max. operating temp.</td>
<td>0.1786 Ω/mile</td>
</tr>
<tr>
<td>Calculated max. ampacity at 120 Deg.C ^</td>
<td>1220 Amp.</td>
</tr>
<tr>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>0.15444 Ω/mile</td>
</tr>
<tr>
<td>Geometric Mean Radius(GMR)</td>
<td>0.385 in</td>
</tr>
<tr>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.41738 Ω/mile</td>
</tr>
<tr>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>0.09452 MΩ.mile</td>
</tr>
</tbody>
</table>

^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation 93W/sq.ft emissivity coefficient: 0.5 & absorptivity: 0.5

* Extreme Load Safety Strength of Conductor =27320 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)
**Concentric Lay Stranded Trapezoidal Conductor : DRAKE**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Nominal equivalent Aluminum Area</th>
<th>Cross Sectional Area - Aluminum</th>
<th>Cross Sectional Area - CTC Core</th>
<th>Total Area of Cross Section - conductor</th>
<th>Overall Diameter of Conductor</th>
<th>Mass per Unit length - Aluminum</th>
<th>Mass per Unit length - Core</th>
<th>Mass per unit length - Conductor</th>
<th>Rated Strength of the Conductor *</th>
<th>Maximum DC Resistance at 20°C (68°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1054.47 kcmil</td>
<td>1022.25 kcmil</td>
<td>0.111 sq.in</td>
<td>0.913 sq.in</td>
<td>1.108 in</td>
<td>962 lb/kft</td>
<td>89 lb/kft</td>
<td>1051 lb/kft</td>
<td>41128 lbf</td>
<td>0.0883 Ω/mile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lay ratio - Outer layer of Aluminum wires : Min.10 Max.13</th>
<th>Lay Direction of outer layer</th>
<th>Right Hand</th>
<th>Surface finish</th>
<th>Standard or Non Specular</th>
<th>Max. single length /Drum</th>
<th>6360 ft (1940 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Inner layer of Aluminum wires : Min.10 Max.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preferred Lay of outer layer</th>
<th>12.191 in</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stranding configuration</th>
<th>AC Resistance at max. temperature *</th>
<th>1682 Amp.</th>
<th>0.1443 Ω/mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>1405 Amp.</td>
<td>0.1249 Ω/mile</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>Geometric Mean Radius(GMR)</td>
<td>0.432 in</td>
<td>0.40366 Ω/mile</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.09117 MΩ/ft</td>
<td></td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in second layer</td>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>1.0128 lbf</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual Aluminum wires</th>
<th>Trapezoidal Wires</th>
<th>89 lb/kft</th>
<th>1051 lb/kft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum conductivity</td>
<td>Height</td>
<td>0.183 in.</td>
<td>0.0378 sq.in</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>Area : Layer-1</td>
<td>0.0378 sq.in</td>
<td></td>
</tr>
<tr>
<td>Composite Core</td>
<td></td>
<td>Layer-2 0.0358 sq.in</td>
<td></td>
</tr>
<tr>
<td>Conductivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Breaking Load</td>
<td></td>
<td>34577 lbf</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coefficient of thermal expansion</th>
<th>Modulus of elasticity above thermal knee point</th>
<th>17.2 Msi</th>
</tr>
</thead>
<tbody>
<tr>
<td>above thermal knee point</td>
<td>below thermal knee point</td>
<td>10.75 Msi</td>
</tr>
<tr>
<td>1.61 x10⁻⁶ /°C</td>
<td>18.86 x10⁻⁶ /°C</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. allowable continuous operating temp. (surface)</th>
<th>Temperature °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>175 °C (347°F)</td>
<td></td>
</tr>
</tbody>
</table>

* Extreme Load Saftety Strength of Conductor =37200 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)

General Specification Standard : ASTM B 857

Document version : Preliminary
## Concentric Lay Stranded Trapezoidal Conductor : CARDINAL

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor Type &amp; Code</td>
<td>ACCC - Cardinal (1222 kcmil/619 mm²)</td>
</tr>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>1266.53 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - Aluminum</td>
<td>1222.46 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - CTC Core</td>
<td>0.093 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section- conductor</td>
<td>1.054 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>1.197 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>1155 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>76 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>1231 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor *</td>
<td>37083 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.0742 Ω/mile</td>
</tr>
<tr>
<td>Lay ratio - Outer layer of Aluminum wires : Min.10 Max.13</td>
<td></td>
</tr>
<tr>
<td>- Inner layer of Aluminum wires : Min.10 Max.16</td>
<td></td>
</tr>
<tr>
<td>Prefered Lay of outer layer</td>
<td>13.17 in</td>
</tr>
<tr>
<td>Lay Direction of outer layer</td>
<td>Right Hand</td>
</tr>
<tr>
<td>Surface finish</td>
<td>Standard or Non Specular</td>
</tr>
<tr>
<td>Max. single length /Drum</td>
<td>8790 ft (2680 m)</td>
</tr>
<tr>
<td>Stranding configuration</td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td>1 x 0.3449 in</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td>3 N°</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>8 x 0.179 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia.of Trapezoidal wires in second layer</td>
<td>12 x 0.184 in</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in third layer</td>
<td>16 x 0.1867 in</td>
</tr>
<tr>
<td>Individual Aluminum wires</td>
<td></td>
</tr>
<tr>
<td>Minimum conductivity</td>
<td>63 %IACS</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>8.5 ksi</td>
</tr>
<tr>
<td>Composite Core</td>
<td></td>
</tr>
<tr>
<td>Conductivity</td>
<td>Nil</td>
</tr>
<tr>
<td>Rated Breaking Load</td>
<td>29249 lbf</td>
</tr>
<tr>
<td>Coefficient of thermal expansion</td>
<td></td>
</tr>
<tr>
<td>above thermal knee point</td>
<td>1.61 x10⁻⁶ /°C</td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>19.90 x10⁻⁶ /°C</td>
</tr>
<tr>
<td>Modulus of elasticity</td>
<td></td>
</tr>
<tr>
<td>above thermal knee point</td>
<td>17.2 Msi</td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>10.51 Msi</td>
</tr>
<tr>
<td>Maximum allowable continuous operating temp. (surface)</td>
<td>175 °C (347°F)</td>
</tr>
<tr>
<td>Rated ampacity at max. temperature ^</td>
<td>1880 Amp.</td>
</tr>
<tr>
<td>AC Resistance at max. operating temp.</td>
<td>0.1217 Ω/mile</td>
</tr>
<tr>
<td>Calculated max. ampacity at 120 Deg.C ^</td>
<td>1567 Amp.</td>
</tr>
<tr>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>0.10543 Ω/mile</td>
</tr>
<tr>
<td>Geometric Mean Radius(GMR)</td>
<td>0.466 in</td>
</tr>
<tr>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.39428 Ω/mile</td>
</tr>
<tr>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>0.08888 MΩ/mile</td>
</tr>
<tr>
<td>^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec</td>
<td></td>
</tr>
<tr>
<td>solar radiation: 93W/sq.ft, emissivity coefficient: 0.5 &amp; absorptivity: 0.5</td>
<td></td>
</tr>
</tbody>
</table>

* Extreme Load Safety Strength of Conductor = 32380 lbf
( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)
Concentric Lay Stranded Trapezoidal Conductor: BITTERN

Conductor Type & Code
Nominal equivalent Aluminum Area
Cross Sectional Area - Aluminum
Cross Sectional Area - CTC Core
Total Area of Cross Section - conductor
Overall Diameter of Conductor
Mass per Unit length - Aluminum
Mass per Unit length - Core
Mass per unit length - Conductor
Rated Strength of the Conductor *
Maximum DC Resistance at 20°C (68°F)

Lay ratio - Outer layer of Aluminum wires: Min.10 Max.13
- Inner layer of Aluminum wires: Min.10 Max.16
Prefered Lay of outer layer 14.798 in

Stranding configuration
No. & Diameter of CTC Core
No. of Aluminum Layers
No. & equivalent Dia. of Trapezoidal wires in first layer
No. & equivalent Dia. of Trapezoidal wires in second layer
No. & equivalent Dia. of Trapezoidal wires in third layer

Individual Aluminum wires
Minimum conductivity 63 %IACS
ASTM minimum Tensile Strength 8.5 ksi
Composite Core
Conductivity Nil
Rated Breaking Load 29249 lbf

Coefficient of thermal expansion
above thermal knee point 1.61 x10^-6/°C
below thermal knee point 20.51 x10^-6/°C

Max. allowable continuous operating temp. (surface) 175 °C (347°F)
Rated ampacity at max. temperature ^ 2209 Amp.
AC Resistance at max. operating temp. 0.0953 Ω/mile
Calculated max. ampacity at 120 Deg.C ^ 1835 Amp.
Calculated AC Resistance at 120 Deg.C 0.08279 Ω/mile
Geometric Mean Radius (GMR) 0.524 in
Inductive Reactance @1ft. radius at 60Hz 0.38013 Ω/mile
Capacitive Reactance @1ft. radius at 60Hz 0.08542 MΩ/mile

^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 & absorptivity: 0.5

* Extreme Load Safety Strength of Conductor =33280 lbf
( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)
Concentric Lay Stranded Trapezoidal Conductor: LAPWING

Conductor Type & Code
Nominal equivalent Aluminum Area 2048.43 kcmil
Cross Sectional Area - Aluminum 1965.65 kcmil
Cross Sectional Area - CTC Core 0.116 sq.in
Total Area of Cross Section - conductor 1.66 sq.in
Overall Diameter of Conductor 1.504 in
Mass per Unit length - Aluminum 1869 lb/kft
Mass per Unit length - Core 95 lb/kft
Mass per unit length - Conductor 1964 lb/kft
Rated Strength of the Conductor * 49040 lbf
Maximum DC Resistance at 20°C (68°F) 0.0464 Ω/mile

Lay ratio - Outer layer of Aluminum wires: Min.10 Max.13
- Inner layer of Aluminum wires: Min.10 Max.16
Prefered Lay of outer layer 16.543 in
Lay Direction of outer layer Right Hand
Surface finish Standard or Non Specular
Max. single length/Drum 8660 ft (2640 m)

Stranding configuration
No. & Diameter of CTC Core 1 x 0.385 in
No. of Aluminum Layers 4 N°
No. & equivalent Dia. of Trapezoidal wires in first layer 8 x 0.185 in
No. & equivalent Dia.of Trapezoidal wires in second layer 12 x 0.187 in
No. & equivalent Dia. of Trapezoidal wires in third layer 16 x 0.1878 in
No. & equivalent Dia. of Trapezoidal wires in fourth layer 20 x 0.1884 in

Individual Aluminum wires
Minimum conductivity 63 %IACS
ASTM minimum Tensile Strength 8.5 ksi
Composite Core
Conductivity Nil
Rated Breaking Load 36443 lbf

Coefficient of thermal expansion
above thermal knee point 1.61 x10^-6/°C
below thermal knee point 20.51 x10^-6/°C

Max. allowable continuous operating temp. (surface) 175 °C (347°F)
Rated ampacity at max. temperature ^ 2546 Amp.
AC Resistance at max. operating temp. 0.0774 Ω/mile
Calculated max. ampacity at 120 Deg.C ^ 2106 Amp.
Calculated AC Resistance at 120 Deg.C 0.06744 Ω/mile
Geometric Mean Radius(GMR) 0.586 in
Inductive Reactance @1ft. radius at 60Hz 0.3666 Ω/mile
Capacitive Reactance @1ft. radius at 60Hz 0.08212 M0.mile

^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 & absorptivity: 0.5

* Extreme Load Safety Strength of Conductor = 41480 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)
## Concentric Lay Stranded Trapezoidal Conductor: CHUKAR

<table>
<thead>
<tr>
<th><strong>Conductor Type &amp; Code</strong></th>
<th><strong>ACCC - Chukar</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>2336.1 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - Aluminum</td>
<td>2241.68 kcmil</td>
</tr>
<tr>
<td>Cross Sectional Area - CTC Core</td>
<td>0.122 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section - conductor</td>
<td>1.883 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>1.602 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>2131 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>99 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>2230 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor *</td>
<td>52720 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.0407 Ω/mile</td>
</tr>
</tbody>
</table>

| **Lay ratio - Outer layer of Aluminum wires** | Min. 10 Max. 13 |
| **Lay Direction of outer layer** | Right Hand |
| **- Inner layer of Aluminum wires** | Min. 10 Max. 16 |
| **Surface finish** | Standard or Non Specular |
| **Prefered Lay of outer layer** | 17.622 in |
| **Max. single length /Drum** | 7550 ft (2300 m) |

<table>
<thead>
<tr>
<th><strong>Stranding configuration</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in second layer</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in third layer</td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in fourth layer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Individual Aluminum wires</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum conductivity</td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
</tr>
<tr>
<td>Composite Core</td>
</tr>
<tr>
<td>Conductor</td>
</tr>
<tr>
<td>Rated Breaking Load</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Coefficient of thermal expansion</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>above thermal knee point</td>
</tr>
<tr>
<td>below thermal knee point</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Modulus of elasticity</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>above thermal knee point</td>
</tr>
<tr>
<td>below thermal knee point</td>
</tr>
</tbody>
</table>

Max. allowable continuous operating temp. (surface) 175 °C (347°F)
Rated ampacity at max. temperature ^ | 2766 Amp. |
AC Resistance at max. operating temp. | 0.0685 Ω/mile |
Calculated max. ampacity at 120 Deg.C ^ | 2283 Amp. |
Calculated AC Resistance at 120 Deg.C | 0.05978 Ω/mile |
Geometric Mean Radius(GMR) | 0.624 in |
Inductive Reactance @1ft. radius at 60Hz | 0.39893 Ω/mile |
Capacitive Reactance @1ft. radius at 60Hz | 0.08024 MΩ/ mile |

^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 & absorptivity: 0.5

* Extreme Load Safety Strength of Conductor = 44100 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)

General Specification Standard : ASTM B 857

Document version : Preliminary

Manufactured under license from CTC Cable Corporation
## Concentric Lay Stranded Trapezoidal Conductor: BLUEBIRD

<table>
<thead>
<tr>
<th>Property</th>
<th>ACCC - Bluebird</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal equivalent Aluminum Area</td>
<td>2841.44 kcmil</td>
</tr>
<tr>
<td>Cross sectional Area - Aluminum</td>
<td>2726.6 kcmil</td>
</tr>
<tr>
<td>Cross sectional Area - CTC Core</td>
<td>0.135 sq.in</td>
</tr>
<tr>
<td>Total Area of Cross Section - conductor</td>
<td>2.277 sq.in</td>
</tr>
<tr>
<td>Overall Diameter of Conductor</td>
<td>1.762 in</td>
</tr>
<tr>
<td>Mass per Unit length - Aluminum</td>
<td>2592 lb/kft</td>
</tr>
<tr>
<td>Mass per Unit length - Core</td>
<td>110 lb/kft</td>
</tr>
<tr>
<td>Mass per unit length - Conductor</td>
<td>2702 lb/kft</td>
</tr>
<tr>
<td>Rated Strength of the Conductor *</td>
<td>59807 lbf</td>
</tr>
<tr>
<td>Maximum DC Resistance at 20°C (68°F)</td>
<td>0.0334 Ω/mile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lay ratio</th>
<th>Lay Direction of outer layer</th>
<th>Right Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer layer of Aluminum wires</td>
<td>Surface finish</td>
<td>Standard or Non Specular</td>
</tr>
<tr>
<td>- Inner layer of Aluminum wires</td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td>Prefered Lay of outer layer</td>
<td></td>
<td>Max. single length /Drum</td>
</tr>
<tr>
<td>Stranding configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. &amp; Diameter of CTC Core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of Aluminum Layers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in first layer</td>
<td>1 x 0.415 in</td>
<td></td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in second layer</td>
<td>4 in</td>
<td></td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in third layer</td>
<td>9 x 0.201 in</td>
<td></td>
</tr>
<tr>
<td>No. &amp; equivalent Dia. of Trapezoidal wires in fourth layer</td>
<td>14 x 0.203 in</td>
<td></td>
</tr>
<tr>
<td>Individual Aluminum wires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum conductivity</td>
<td>63 %IACS</td>
<td></td>
</tr>
<tr>
<td>ASTM minimum Tensile Strength</td>
<td>8.5 ksi</td>
<td></td>
</tr>
<tr>
<td>Composite Core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductivity</td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>Rated Breaking Load</td>
<td>42334 lbf</td>
<td></td>
</tr>
<tr>
<td>Coefficient of thermal expansion</td>
<td></td>
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</tr>
<tr>
<td>above thermal knee point</td>
<td>1.61 x10⁻⁶ /°C</td>
<td></td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>20.88 x10⁻⁶ /°C</td>
<td></td>
</tr>
<tr>
<td>Modulus of elasticity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>above thermal knee point</td>
<td>17.2 Msi</td>
<td></td>
</tr>
<tr>
<td>below thermal knee point</td>
<td>10.3 Msi</td>
<td></td>
</tr>
<tr>
<td>Max. allowable continuous operating temp. (surface)</td>
<td>175 °C (347°F)</td>
<td></td>
</tr>
<tr>
<td>Rated ampacity at max. temperature ^</td>
<td>3126 Amp.</td>
<td></td>
</tr>
<tr>
<td>AC Resistance at max. operating temp.</td>
<td>0.0572 Ω/mile</td>
<td></td>
</tr>
<tr>
<td>Calculated max. ampacity at 120 Deg.C ^</td>
<td>2568 Amp.</td>
<td></td>
</tr>
<tr>
<td>Calculated AC Resistance at 120 Deg.C</td>
<td>0.05022 Ω/mile</td>
<td></td>
</tr>
<tr>
<td>Geometric Mean Radius (GMR)</td>
<td>0.686 in</td>
<td></td>
</tr>
<tr>
<td>Inductive Reactance @1ft. radius at 60Hz</td>
<td>0.34739 Ω/mile</td>
<td></td>
</tr>
<tr>
<td>Capacitive Reactance @1ft. radius at 60Hz</td>
<td>0.07743 MΩ.mile</td>
<td></td>
</tr>
</tbody>
</table>

^ Ampacity calculated at 25 Deg.C ambient, wind velocity 2ft/sec solar radiation: 93W/sq.ft emissivity coefficient: 0.5 & absorptivity: 0.5

* Extreme Load Safety Strength of Conductor = 49320 lbf

( Applicable if sustained load over 80% RTS expected for prolonged periods. For further information please refer to ACCC Technical note TN-755-001.)

General Specification Standard: ASTM B 857

Document version: Preliminary