<table>
<thead>
<tr>
<th>Section Title / Drawing Number</th>
<th>Current Published</th>
<th>Issued Document Revision Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 20 - Pages 111-1 to 111-10 Ver 3 (3.8 MB)</td>
<td>4-Apr-16</td>
<td>3</td>
</tr>
<tr>
<td>5-20-111-1</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-2</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-3</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-4</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-5</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-6</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-7</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-8</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-9</td>
<td>OB OC</td>
<td>OD</td>
</tr>
<tr>
<td>5-20-111-10</td>
<td>OB OC</td>
<td>OD</td>
</tr>
</tbody>
</table>

Degree symbols in the title boxes are displayed as %D. This does not effect the accuracy of the drawings. This will be resolved in the next revision.
### NOTES

1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/- 2mm tolerance between them and +/- 2mm orientation tolerance.
3. Longitudinal capacities to be not less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.
6. No subsidiary to be incorporated on 18m poles.

---

**TABLE:**

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Orientation</th>
<th>Fitting Description</th>
<th>Tube Length</th>
<th>Fitting Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.0</td>
<td>ø40m Female (Min 43mm length)</td>
<td>Cross Member Attachment Plate</td>
<td>1/2 OD SS Tube</td>
</tr>
<tr>
<td>200</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Top Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>395</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Lower Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>405</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>410</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>1290</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>1250</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>2100</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>2450</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>2500</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>3000</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>3200</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
<tr>
<td>4900</td>
<td>0.0</td>
<td>ø22 OD SS Tube</td>
<td>Bottom Ring</td>
<td>ø22 OD SS Tube</td>
</tr>
</tbody>
</table>

---

**Refer dwg 5-7-3 for Foundations**

**Refer dwg 5-4-167 for Pole Construction**

---

**SUPERSEDES:**

- Drawn: 14/03/2016
- P DE SOUSA ROQUE

---

**ERGON ENERGY CORPORATION LTD**

- ABN 50 087 646 062

---

**DRAWING NUMBER:** 5-20-111-1

---

**OVERHEAD SUB-TRANSMISSION 60kV CONCRETE POLE MANUFACTURING DETAILS**

- DOUBLE OLT RURAL VERTICAL STRAIN 45°d - 500yd ANGLE
- 18m x 40m POLE

---

**REVISION:**

- 5.0

---

**ERGON ENERGY CORPORATION LTD**

- P DE SOUSA ROQUE

---

**DRAWING NUMBER:** 5-20-111-1

---

**OVERHEAD SUB-TRANSMISSION 60kV CONCRETE POLE MANUFACTURING DETAILS**

- DOUBLE OLT RURAL VERTICAL STRAIN 45°d - 500yd ANGLE
- 18m x 40m POLE
**DESCRIPTION**

- **FITTING**: M16 Female (M40 thread length) Cross Member Attachment Plate
- **TUBE**: 38 OD S/S Tubing
- **FITTING PURPOSE**: Cross Member Attachment Plate

**NOTES**

1. Orientation is measured clockwise when looking down on pole lip.
2. Brackets fittings require ±2 mm tolerance between them and ±2 mm orientation tolerance.
3. Longitudinal capacities may be less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal 310 vent hole is required at the centre of the through tube provided for square rigging.
6. No subsidiary to be incorporated on this pole.

**Refer dwg 5-7-3-2 for Foundations**
**Refer dwg 5-4-167-8 for Pole Construction**

---

**STOCK CODE**: 2445682

---

**OVERHEAD SUB-TRANSMISSION**

60kV CONCRETE POLE MANUFACTURING DETAILS

DOUBLE C/C T R U A L V E R T I C A L S T R A I N 45°d - 55°d ANGLE 21m x 69kN POLE
LIMIT STATE DESIGN LOAD (kN) 60

FALL ARREST BRACKET AND STEP BOLT TO POLE

DESCRIPTION

- Top Phase Flanged Eye Bolt (M20)
- Lower Inline Stay Bracket Bottom Bolt (M24)
- Middle Phase Flanged Eye Bolt (M20)
- Upper Bisect Stay, Backing Plate Bottom Bolt (M24)
- Stay Bracket, Backing Plate, Eyenut Bottom Bolt (M24)
- Stay Bracket, Backing Plate, Eyenut Top Bolt (M24)
- 5mm Galv, Cross Wires (access barrier)
- Name Plate

ISSUE

- 24m x 60kN POLE
- DOUBLE CCT RURAL VERTICAL STRAIN 45° - 55° ANGLE

STOCK CODE: C6RDV606EDL/EDR/C6RDVZ606EDL/EDR

NOTES

1. Orientation is measured clockwise when looking down on pole top.
2. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2 mm orientation tolerance.
3. Longitudinal capacities to be not less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.

Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-167-8 for Pole Construction
**NOTES**

1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/-2 mm tolerance between them and +/-2 mm orientation tolerance.
3. Longitudinal capacities to be less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal 801 vent hole is required at the centres of the through tube provided for square rigging.

Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-167-8 for Pole Construction
Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-167-8 for Pole Construction
1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2 mm orientation tolerance.
3. Longitudinal capacities to be not less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.

Refer dwg 5-7-3-2 for Foundations

Refer dwg 5-4-167-8 for Pole Construction
NOTES:
1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2mm orientation tolerance.
3. Longitudinal capacities are to be not less than transverse capacities.
4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.

Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-167-8 for Pole Construction
Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-167-8 for Pole Construction