Ergon Energy Document Revision List
Project: - Sub-Transmission Construction Manual
Electronic - Website Version

<table>
<thead>
<tr>
<th>Section Title / Drawing Number</th>
<th>Current Published</th>
<th>Issued Document Revision Number:</th>
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<td>Section 20 - Pages 12-1 to 12-10 Ver 2 (11.5 MB)</td>
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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 ±1-2 mm tolerance between them and ±1-2 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.
6. No subsidiary to be incorporated on 18m poles.
7. Temporary stays may be required during construction and/or maintenance works.

Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-17-14 for Pole Construction
NOTES
1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/- 2° orientation between them and +/- 2° 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 Ø 10 vent hole is required at the centre of the through tube provided for square rigging.
6. Temporary stays may be required during construction and/or maintenance works.

DISTANCE FROM TIP (mm)  

<table>
<thead>
<tr>
<th>TUBE</th>
<th>DESCRIPTION</th>
<th>FOOTING</th>
<th>FITTING PURPOSE</th>
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<tbody>
<tr>
<td>Tip and pole cap</td>
<td>300</td>
<td>Stay bracket, backing plate, eye nut top bolt (M24)</td>
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<tr>
<td>22 OD S/S tube</td>
<td>270</td>
<td>Middle earth nut (25mm thread)</td>
<td>2</td>
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<td>25 OD S/S tube</td>
<td>240</td>
<td>Lower inline stay bracket top bolt (M24)</td>
<td>3</td>
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<tr>
<td>22 OD S/S tube</td>
<td>210</td>
<td>Lower inline stay bottom bolt (M24)</td>
<td>4</td>
</tr>
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<td>25 OD S/S tube</td>
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<td>Lower inline stay bolt (M24)</td>
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<td>-300</td>
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NAME PLATE INFORMATION

STOCK CODE: 2410876

OVERHEAD SUB-TRANSMISSION

66kV CONCRETE POLE MANUFACTURING DETAILS

SINGLE CIRCUIT RURAL VERTICAL, STRAINA

42m X 60m AND 55% - 65% ANGLE POLE

ABN 50 087 646 062

EGON ENERGIA CORPORATION LTD

DRAWING NUMBER 5-20-12-3

NAME PLATE INFORMATION

STANDARD / MARINE GRADE

BATCH NO.

POLE MANUFACTURE

LENGTH OF POLE (m) / LIMIT STATE DESIGN LOAD

MONTH AND YEAR OF MANUFACTURE

SUPERSEDES:

CHECKED:

P DE SOUSA ROQUE

EGON ENERGIA CORPORATION LTD

DRAWING NUMBER 5-20-12-3

5 20 12-3 NC

OVERHEAD SUB-TRANSMISSION

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SUPERSEDES:

CHECKED:

P DE SOUSA ROQUE

EGON ENERGIA CORPORATION LTD

DRAWING NUMBER 5-20-12-3

5 20 12-3 NC
### Notes

1. Orientation is measured clockwise when looking down on pole tip.
2. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2° rotation tolerance.
3. Longitudinal capacities to be not less than transverse capacities.
4. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2° orientation tolerance.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.
6. Temporary stays may be required during construction and/or maintenance works.
7. Fall Arrest Bracket and Step bolt to pole.
8. Earth.

### Table: Pole Fitting Details

<table>
<thead>
<tr>
<th>Distance From</th>
<th>Orientation</th>
<th>Fitting Description</th>
<th>Fitting Purpose</th>
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</thead>
<tbody>
<tr>
<td>0' 0&quot; X 0&quot;</td>
<td>22 OD S/S tube</td>
<td>Tip ring and pole cap</td>
<td>For maintenance purpose</td>
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<tr>
<td>200</td>
<td>100</td>
<td>M12 earth ferrule (30mm thread)</td>
<td>2. Joint to pole</td>
</tr>
<tr>
<td>200</td>
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<td>1. Joint to pole</td>
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### Table: PoleULLET DETAILS

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| MANUFACTURER: Ergon Energy Corporation Ltd |}

### Table: Pole Fitting Details (continued)

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<th>Distance From</th>
<th>Orientation</th>
<th>Fitting Description</th>
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<tbody>
<tr>
<td>0' 0&quot; X 0&quot;</td>
<td>22 OD S/S tube</td>
<td>Lateral gusset cross pieces</td>
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### Table: PoleULLET DETAILS (continued)

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| For maintenance purpose |}
**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 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. Bracketed fittings require +/- 2 mm tolerance between them and +/- 2mm orientation tolerance.
7. No subsidiary to be incorporated on 18m poles.
8. Temporary stays may be required during construction and/or maintenance works.

**Access barrier**

Refer dwg 5-7-3-2 for Foundations

Refer dwg 5-4-17-14 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 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. Temporary stays may be required during construction and/or maintenance works.

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**DISTANCE FROM TOP (mm)**

<table>
<thead>
<tr>
<th>O</th>
<th>X</th>
<th>R</th>
<th>T</th>
<th>S</th>
<th>P</th>
<th>M</th>
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</tbody>
</table>

**FITTING DESCRIPTION**

<table>
<thead>
<tr>
<th>O</th>
<th>X</th>
<th>R</th>
<th>T</th>
<th>S</th>
<th>P</th>
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**FITTING PURPOSE**

<table>
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<tr>
<th>O</th>
<th>X</th>
<th>R</th>
<th>T</th>
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<th>P</th>
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**DESCRIPTION**

- 25 OD S/S tube
- 32 OD S/S tube
- 30 OD S/S tube
- 19 OD S/S tube

**FITTING**

- M10 ferrule
- M16 ferrule
- M20 ferrule
- M24 ferrule

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**NOTES**

Refer dwg 5-7-3-2 for Foundations
Refer dwg 5-4-17-14 for Pole Construction
22 OD S/S tube
300°
25 OD S/S tube
32 OD S/S tube
Tip ring and pole cap
Fall Arrest Bracket and Step bolt to pole
M12 earth ferrule (30mm thread)

25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
452
32 OD S/S tube
180°
E

32 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Fall Arrest Bracket and Step bolt to pole
Top phase bridging insulator bottom bolt (M16)
568

Fall Arrest Bracket and Step bolt to pole
Name plate
M16 ferrule (25mm thread)
Fall Arrest Bracket and Step bolt to pole
560
(BLACK SOIL)

Lower bisect Stay Bottom Bolt (M24)
572

Bottom Phase Flanged Eye Bolt (M20)
0.67
25 OD S/S tube
25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
For maintenance purpose

Middle Phase Flanged Eye Bolt (M20)
509

Earth
25 OD S/S tube
32 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Earth
25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
470
Earth
32 OD S/S tube

Fall Arrest Bracket and Step bolt to pole
25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Fall Arrest Bracket and Step bolt to pole
Upper Bisect Stay, backing plate bottom bolt (M24)
568

22 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Middle Phase Flanged Eye Bolt (M20)
509

Earth
25 OD S/S tube
32 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Earth
25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
470
Earth
32 OD S/S tube

Fall Arrest Bracket and Step bolt to pole
25 OD S/S tube
Fall Arrest Bracket and Step bolt to pole
Fall Arrest Bracket and Step bolt to pole
Upper Bisect Stay Bracket Top Bolt (M24)
585

Lower bisect Stay Bracket Top Bolt (M24)
572

Subsidiary center phase bridging insulator top bolt (M16)
Subsidiary center phase bolt (M20)
Subsidiary crossarm brace (M16)
Middle phase bridging insulator top bolt(M16)
Top Phase Flanged Eye Bolt (M20)
E

ISSUE
32 OD S/S tube
Stay bracket, backing plate, eyenut top bolt (M24)
180°
M12 earth ferrule (30mm thread)
10300

8.6 Temporary stays may be required during construction and/or maintenance works.

6. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.

5. Longitudinal capacities to be not less than transverse capacities.

4. Stainless steel tubes are to be accurately positioned and free from concrete and deformity.

3. Longitudinal capacities to be not less than transverse capacities.

2. Bracketed fittings require ±2 mm tolerance between them and ±2 mm orientation tolerance

1. Orientation is measured clockwise when looking down on pole top.
1. Orientation is measured clockwise when looking down on pole tip.
2. All bolted fittings require ±2 mm tolerance between them and ±1/2 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 deformities.
5. A nominal Ø10 vent hole is required at the centre of the through tube provided for square rigging.
6. Temporary stays may be required during construction and/or maintenance works.