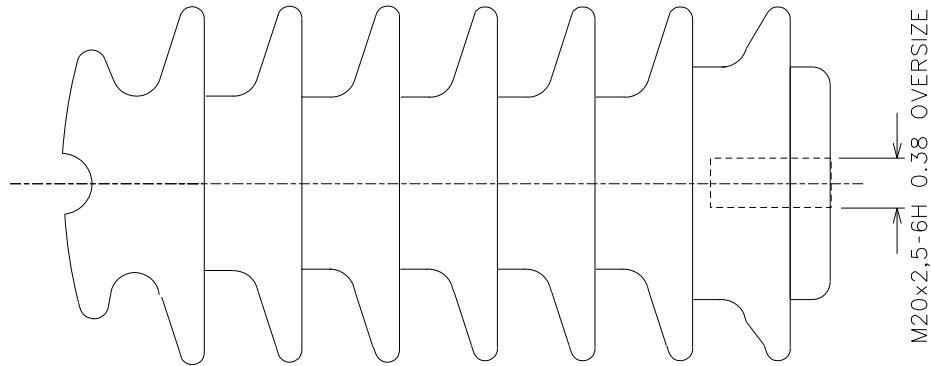



TYPICAL



NOTE :

- \* 4kN POST INSULATORS ARE TO BE USED ON ALL LINES UP TO AND INCLUDING OAK/HARE CONDUCTORS.
- \* 10kN POST INSULATORS TO BE USED WITH ALL CONDUCTORS AT ROAD CROSSINGS OR ON LINES WITH CONDUCTORS LARGER THAN OAK/HARE UP TO KINGBIRD CONDUCTOR.

|  |   |                                   |                    |  |            |            |           |     |
|--|---|-----------------------------------|--------------------|--|------------|------------|-----------|-----|
| SAP MATERIAL No.:  |   | 0167491                           |                    |  |            |            |           |     |
| SHORT DESCRIPTION:   |   | INSUL,LINE POST 22kV 4kN LM D2017 |                    |  |            |            |           |     |
| TECH. DESCRIPTION:   |   |                                   |                    |  |            |            |           |     |
| LINE POST INSULATOR (CAPLESS) * FOR LIGHT AND MEDIUM POLLUTION AREAS *<br>RATED VOLTAGE: 22kV * MINIMUM REQUIRED TOTAL CREEPAGE DISTANCE: 480mm *<br>SPECIFIC CREEPAGE: 20mm/kV @ 24kV Um * CANTILEVER STRENGTH: 4kN *<br>LIGHTNING IMPULSE WITHSTAND: 170kV * RATED 50Hz WET WITHSTAND: 50kV *<br>F-NECK * INSERT M20x2.5-6H (0.38mm OVERSIZE) * 55mm THREAD DEPTH *<br>SPINDLE D-DT-3050 * FOR USE UP TO OAK/HARE CONDUCTOR *<br>LINE POST INSULATORS TO BE APPROVED BY INSULATOR WORK GROUP *<br>INSULATOR TO BE BROWN IN COLOUR FOR 4kN POST INSULATORS *<br>ESKOM DRAWING No. D-DT-2017 * |   |                                   |                    |  |            |            |           |     |
| ITEM   | :- INSUL,POST 22kV  |                                   |                    |  |            |            |           |     |
| MATERIAL GROUP   | :- INSULATORS   |                                   |                    |  |            |            |           |     |
| MATERIAL SPECIFICATION   | :- DSP 34 - 213 & DSP 34 - 224  |                                   |                    |  |            |            |           |     |
| CORROSION SPECIFICATION  | :- DSP 34 - 213 & DSP 34 - 224  |                                   |                    |  |            |            |           |     |
| FAILING LOAD (kN)  | 4kN AND 10kN MINIMUM  |                                   |                    |  |            |            |           |     |
| CREEPAGE DISTANCE (mm)   | :- 480mm (20mm/kV) & 744mm (31mm/kV)  |                                   |                    |  |            |            |           |     |
| STANDARD SPECIFICATION   | :- SANS IEC 60383 PART 1  |                                   |                    |  |            |            |           |     |
| ESKOM SPECIFICATION  | :- DSP_34-1677  |                                   |                    |  |            |            |           |     |
| LAP MATERIAL GROUP   | :- LINE POST INSULATORS   |                                   |                    |  |            |            |           |     |
| TEST & CERTIFICATION REQUIREMENTS :- DESIGN TESTS – KIPTS, TORQUE, CANTILEVER  |   |                                   |                    |  |            |            |           |     |
| INSPECTION   | Yes   | No                                | ESKOM RELEASE NOTE | Yes  | No         |            |           |     |
| IDENTIFICATION:- DSP 34 – 1677 – CLAUSE 4.14 TO INCLUDE; SPECIFIED CANTILEVER LOAD, SPECIFIED TENSILE LOAD MAXIMUM DESIGN CANTILEVER LOAD (4.14 C)   |   |                                   |                    |  |            |            |           |     |
| 1  | SAP NUMBER 0216687 AND 0216688 ADDED.   |                                   | J.S.               | J.S. BLAAUW  | G. STRELEC | 16.04.2021 |           |     |
| 0  | 0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM. |                                   | P.A.T. J.S.B.      | J.S. BLAAUW  | B. MCLAREN | 03.07.2015 |           |     |
| REV  | REVISION DESCRIPTION  |                                   | BY                 | CHKD   | AUTH       | DATE       | REF. DWGS |     |
| AUTH:  | B. MCLAREN  | DATE:                             | 03.07.2015         | <br><b>D-DT-2017</b> |            | SAP No:    |           |     |
| CHKD:  | J.S. BLAAUW   | DATE:                             | 03.07.2015         |  |            | 0167491    |           |     |
| DRAWN:   | P.A. TRUBLET<br>J.S. BLAAUW   | DATE:                             | 19.05.2015         |  |            | SET        | SHEET     | REV |
|  |   |                                   |                    |  |            | 4          | 1         | 1   |

Unique Identifier:240-48887441

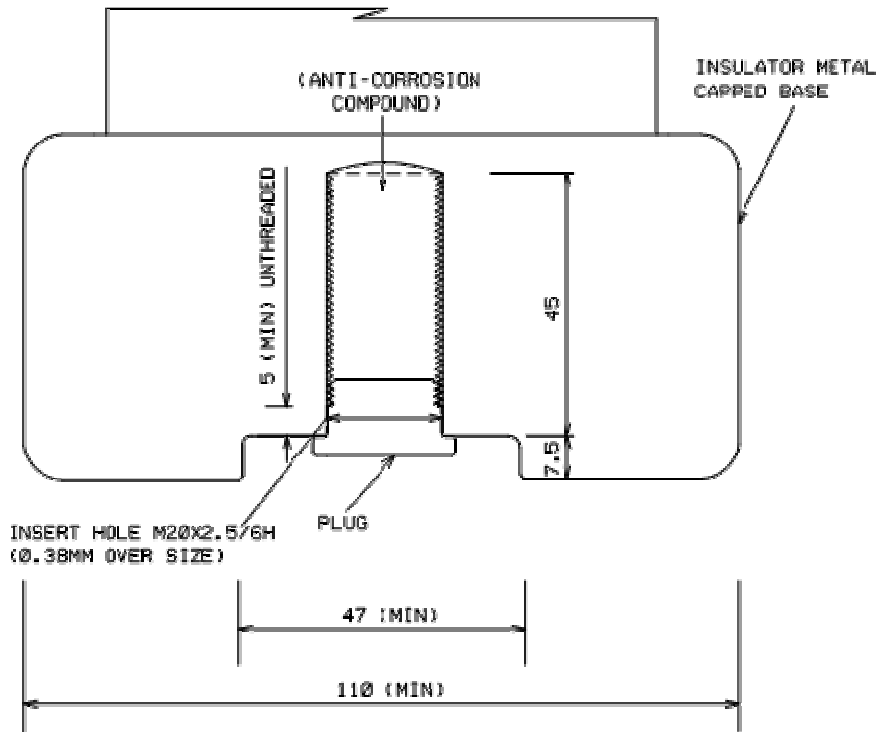
Revision 1

## SPEC SHEET

|   |   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
|---|---|------------------|----------------------|------------|---|-----------|--|---|---------------------------------------|------|-------------|------------|------------|--|---|---|------------------|-------------|------------|------------|--|-----|----------------------|----|------|------|------|-----------|
| SAP MATERIAL No.:   | 0167580   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| SHORT DESCRIPTION:  | INSUL,LINE POST 22kV 4kN HVH D2017  |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| <b>TECH. DESCRIPTION:</b><br>LINE POST INSULATOR (CAPLESS) * FOR HEAVY AND VERY HEAVY POLLUTION AREAS *<br>RATED VOLTAGE: 22kV * MINIMUM REQUIRED TOTAL CREEPAGE DISTANCE: 744mm *<br>SPECIFIC CREEPAGE: 31mm/kV @ 24kV Um * CANTILEVER STRENGTH: 4kN *<br>LIGHTNING IMPULSE WITHSTAND: 170kV * RATED 50Hz WET WITHSTAND: 50kV *<br>F-NECK * INSERT M20x2.5-6H (0.38mm OVERSIZE) * 55mm THREAD DEPTH *<br>SPINDLE D-DT-3050 * FOR USE UP TO OAK/HARE CONDUCTOR *<br>LINE POST INSULATORS TO BE APPROVED BY INSULATOR WORK GROUP *<br>INSULATOR TO BE BROWN IN COLOUR FOR 4kN POST INSULATORS *<br>ESKOM DRAWING No. D-DT-2017 *   |   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| SAP MATERIAL No.:   | 0168049   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| SHORT DESCRIPTION:  | INSUL,LINE POST 22kV 10kN HVH 31C D2017   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| <b>TECH. DESCRIPTION:</b><br>LINE POST INSULATOR (CAPLESS) * FOR HEAVY AND VERY HEAVY POLLUTION AREAS *<br>RATED VOLTAGE: 22kV * MINIMUM REQUIRED TOTAL CREEPAGE DISTANCE: 744mm *<br>SPECIFIC CREEPAGE: 31mm/kV @ 24kV Um * CANTILEVER STRENGTH: 10kN *<br>LIGHTNING IMPULSE WITHSTAND: 170kV * RATED 50Hz WET WITHSTAND: 50kV *<br>F-NECK * INSERT M20x2.5-6H (0.38mm OVERSIZE) * 55mm THREAD DEPTH *<br>SPINDLE D-DT-3050 * FOR USE UP TO KINGBIRD CONDUCTOR *<br>LINE POST INSULATORS TO BE APPROVED BY INSULATOR WORK GROUP *<br>INSULATOR TO BE LIGHT GREY IN COLOUR FOR 10kN POST INSULATORS *<br>ESKOM DRAWING No. D-DT-2017 *  |   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 40%;">SAP NUMBER 0216687 AND 0216688 ADDED.</td> <td style="width: 10%;">J.S.</td> <td style="width: 15%;">J.S. BLAAUW</td> <td style="width: 15%;">G. STRELEC</td> <td style="width: 10%;">16.04.2021</td> <td style="width: 5%;"></td> </tr> <tr> <td>0</td> <td>0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM.</td> <td>P.A.T.<br/>J.S.B.</td> <td>J.S. BLAAUW</td> <td>B. MCLAREN</td> <td>03.07.2015</td> <td></td> </tr> <tr> <td>REV</td> <td>REVISION DESCRIPTION</td> <td>BY</td> <td>CHKD</td> <td>AUTH</td> <td>DATE</td> <td>REF. DWGS</td> </tr> </table> |   |                  |                      |            |   |           |  | 1 | SAP NUMBER 0216687 AND 0216688 ADDED. | J.S. | J.S. BLAAUW | G. STRELEC | 16.04.2021 |  | 0 | 0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM. | P.A.T.<br>J.S.B. | J.S. BLAAUW | B. MCLAREN | 03.07.2015 |  | REV | REVISION DESCRIPTION | BY | CHKD | AUTH | DATE | REF. DWGS |
| 1   | SAP NUMBER 0216687 AND 0216688 ADDED.   | J.S.             | J.S. BLAAUW          | G. STRELEC | 16.04.2021  |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| 0   | 0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM. | P.A.T.<br>J.S.B. | J.S. BLAAUW          | B. MCLAREN | 03.07.2015  |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| REV   | REVISION DESCRIPTION  | BY               | CHKD                 | AUTH       | DATE  | REF. DWGS |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| AUTH: B. MCLAREN  |   | DATE: 03.07.2015 | SCALE NTS            |            | <div style="display: flex; justify-content: space-between; align-items: center;"> <div> <b>SAP No:</b><br/>           0167580<br/>           0168049         </div> <div> <b>SET</b><br/>           4         </div> <div> <b>SHEET</b><br/>           2         </div> <div> <b>REV</b><br/>           1         </div> </div> |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| CHKD: J.S. BLAAUW   |   | DATE: 03.07.2015 | CAD REF: SERIES 2000 |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
| DRAWN: P.A. TRUBLET<br>J.S. BLAAUW  |   | DATE: 19.05.2015 | FILE No: 2017        |            | <div style="display: flex; justify-content: space-between; align-items: center;"> <div> <div style="margin-left: 10px;"> <b>D-DT-2017</b> </div> </div> </div>  |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |
|   |   |                  |                      |            |   |           |  |   |                                       |      |             |            |            |  |   |   |                  |             |            |            |  |     |                      |    |      |      |      |           |


## SPEC SHEET

|   |   |       |                    |                      |            |            |           |  |
|---|---|-------|--------------------|----------------------|------------|------------|-----------|--|
| SAP MATERIAL No.:   | 0216687   |       |                    |                      |            |            |           |  |
| SHORT DESCRIPTION:  | INSUL,CAPPED POST 22kV 4kN HVH D3017  |       |                    |                      |            |            |           |  |
| <b>TECH. DESCRIPTION:</b><br>LINE POST INSULATOR (CAPPED) * FOR HEAVY AND VERY HEAVY POLLUTION AREAS *<br>RATED VOLTAGE: 22kV * MINIMUM REQUIRED TOTAL CREEPAGE DISTANCE: 744mm *<br>SPECIFIC CREEPAGE: 31mm/kV @ 24kV Um * CANTILEVER STRENGTH: 4kN *<br>LIGHTNING IMPULSE WITHSTAND: 170kV * RATED 50Hz WET WITHSTAND: 50kV *<br>F-NECK * CAP INSERT M20x2.5-6H (0.38mm OVERSIZE) * 45mm THREAD DEPTH *<br>PORCELAIN INSULATOR BASE DIMENSIONS SEE SH. 2 *<br>SPINDLE D-DT-3050 * FOR USE UP TO OAK/HARE CONDUCTOR *<br>LINE POST INSULATORS TO BE APPROVED BY INSULATOR WORK GROUP *<br>INSULATOR TO BE BROWN IN COLOUR FOR 4kN POST INSULATORS *<br>ESKOM DRAWING No. D-DT-2017 *   |   |       |                    |                      |            |            |           |  |
| SAP MATERIAL No.:   | 0216688   |       |                    |                      |            |            |           |  |
| SHORT DESCRIPTION:  | INSUL,CAPPED POST 22kV 10kN HVH D3017   |       |                    |                      |            |            |           |  |
| <b>TECH. DESCRIPTION:</b><br>LINE POST INSULATOR (CAPPED) * FOR HEAVY AND VERY HEAVY POLLUTION AREAS *<br>RATED VOLTAGE: 22kV * MINIMUM REQUIRED TOTAL CREEPAGE DISTANCE: 744mm *<br>SPECIFIC CREEPAGE: 31mm/kV @ 24kV Um * CANTILEVER STRENGTH: 10kN *<br>LIGHTNING IMPULSE WITHSTAND: 170kV * RATED 50Hz WET WITHSTAND: 50kV *<br>F-NECK * CAP INSERT M20x2.5-6H (0.38mm OVERSIZE) * 45mm THREAD DEPTH *<br>PORCELAIN INSULATOR BASE DIMENSIONS SEE SH. 2 *<br>SPINDLE D-DT-3050 *<br>FOR USE UP TO KINGBIRD CONDUCTOR *<br>LINE POST INSULATORS TO BE APPROVED BY INSULATOR WORK GROUP<br>INSULATOR TO BE GREY IN COLOUR FOR 10kN POST INSULATORS *<br>ESKOM DRAWING No. D-DT-2017 * |   |       |                    |                      |            |            |           |  |
| ITEM  | :- INSUL,POST 22kV  |       |                    |                      |            |            |           |  |
| MATERIAL GROUP  | :- INSULATORS   |       |                    |                      |            |            |           |  |
| MATERIAL SPECIFICATION  | :- DSP 34 - 213 & DSP 34 - 224  |       |                    |                      |            |            |           |  |
| CORROSION SPECIFICATION   | :- DSP 34 - 213 & DSP 34 - 224  |       |                    |                      |            |            |           |  |
| FAILING LOAD (kN)   | 4kN AND 10kN MINIMUM  |       |                    |                      |            |            |           |  |
| CREEPAGE DISTANCE (mm)  | :- 480mm (20mm/kV) & 744mm (31mm/kV)  |       |                    |                      |            |            |           |  |
| STANDARD SPECIFICATION  | :- SANS IEC 60383 PART 1  |       |                    |                      |            |            |           |  |
| ESKOM SPECIFICATION   | :- DSP_34-1677  |       |                    |                      |            |            |           |  |
| LAP MATERIAL GROUP  | :- LINE POST INSULATORS   |       |                    |                      |            |            |           |  |
| <b>TEST &amp; CERTIFICATION REQUIREMENTS :- DESIGN TESTS – KIPTS, TORQUE, CANTILEVER</b>  |   |       |                    |                      |            |            |           |  |
| INSPECTION  | Yes   | No    | ESKOM RELEASE NOTE |                      |            | Yes        | No        |  |
| <b>IDENTIFICATION:- DSP 34 – 1677 – CLAUSE 4.14 TO INCLUDE; SPECIFIED CANTILEVER LOAD, SPECIFIED TENSILE LOAD MAXIMUM DESIGN CANTILEVER LOAD (4.14 C)</b>   |   |       |                    |                      |            |            |           |  |
| 1   | SAP NUMBER 0216687 AND 0216688 ADDED.   |       | J.S.               | J.S. BLAAUW          | G. STRELEC | 16.04.2021 |           |  |
| 0   | 0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM. |       | P.A.T.<br>J.S.B.   | J.S. BLAAUW          | B. MCLAREN | 03.07.2015 |           |  |
| REV   | REVISION DESCRIPTION  |       | BY                 | CHKD                 | AUTH       | DATE       | REF. DWGS |  |
| AUTH:   | B. MCLAREN  | DATE: | 03.07.2015         | <br><b>D-DT-2017</b> |            | SAP No:    |           |  |
| CHKD:   | J.S. BLAAUW   | DATE: | 03.07.2015         |                      |            | 0216687    |           |  |
|   |   |       |                    |                      |            | 0216688    |           |  |
| DRAWN:  | P.A. TRUBLET<br>J.S. BLAAUW   | DATE: | 19.05.2015         |                      |            | SET        | SHEET     |  |
|   |   |       |                    |                      |            | 4          | 3         |  |
|   |   |       |                    |                      |            |            | 1         |  |



**NOTES:**

1. CORROSION SPECIFICATION: HOT-DIP GALVANIZED TO SANS121 (ISO 146).
2. MATERIAL SPECIFICATION AS PER EN10225-2.
3. FEMALE THREADS SHALL BE COATED WITH AN ANTI-CORROSION COMPOUND AND SEALED WITH A REMOVABLE CAP OR PLUG.

|        |   |       |            |                         |  |             |            |            |           |     |
|--------|---|-------|------------|-------------------------|--|-------------|------------|------------|-----------|-----|
| 1      | SAP NUMBER 0216687 AND 0216688 ADDED.   |       |            |                         | J.S.   | J.S. BLAAUW | G. STRELEC | 16.04.2021 |           |     |
| 0      | 0167491, 0167580 AND 0168049 REPOSITIONED FROM D-DT-3017. CAPLESS PORCELAIN INSULATORS TO BE DISCONTINUED FROM FUTURE USE WITHIN ESKOM. |       |            |                         | P.A.T.<br>J.S.B.   | J.S. BLAAUW | B. MCLAREN | 03.07.2015 |           |     |
| REV    | REVISION DESCRIPTION  |       |            |                         | BY   | CHKD        | AUTH       | DATE       | REF. DWGS |     |
| AUTH:  | B. MCLAREN  | DATE: | 03.07.2015 | SCALE<br>NTS            |  |             |            | SAP No:    |           |     |
| CHKD:  | J.S. BLAAUW   | DATE: | 03.07.2015 | CAD REF:<br>SERIES 2000 |  |             |            |            |           |     |
| DRAWN: | P.A. TRUBLET<br>J.S. BLAAUW   | DATE: | 19.05.2015 | FILE No:<br>2017        | D-DT-2017  |             |            | SET        | SHEET     | REV |
|        |   |       |            |                         |  |             |            | 4          | 4         | 1   |