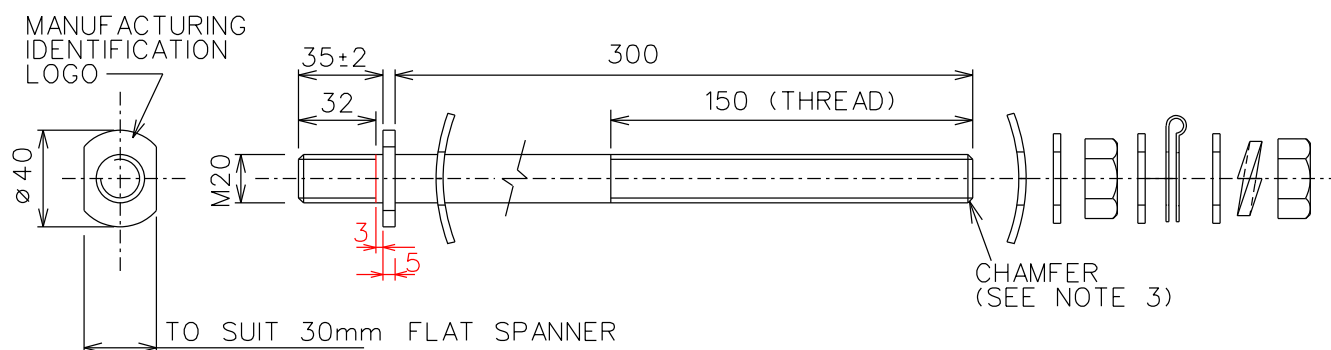


NOTE:
(REQUIRED FOR FORGED AND NON-FORGED UNITS)

| | | | | | | | | |
|---|--|---|-------|--------------------|-------------|---------|------------|-----------|
| SAP MATERIAL No.: | | 0168509 | | | | | | |
| SHORT DESCRIPTION: | | SPINDLE SHORT M20x50 REGULAR SHANK D3050 | | | | | | |
| TECH. DESCRIPTION: | | | | | | | | |
| INSULATOR SPINDLE SHORT * SHANK THREAD AND LENGTH M20x2.5-6g (0.38 OVERSIZE)x50mm (50mm THREAD LENGTH) (THREAD TO BE CUT AT RIGHT ANGLES) * INSULATOR INSERT THREAD M20x2.5-6g (0.38 OVERSIZE)x35±2mm (THREAD TO BE CUT AT RIGHT ANGLES) * SPINDLE TO HAVE ROUND COLLAR AT 90 DEGREES SQUARED ON TWO SIDES TO TAKE 30mm WRENCH * COMPLETE WITH : ONE M20 FLAT ROUND WASHER AND ONE M20 SPRING WASHER (D-DT-3014) AND ONE M20 HEXAGON NUT (D-DT-3173) (ALL NUTS, WASHERS ETC. TO BE RUN ONTO THREAD 40mm) * THREAD TO BE SMOOTHED WITH NUT PRIOR TO DELIVERY * ESKOM DRAWING No. D-DT-3050 * | | | | | | | | |
| ITEM | | :- SPINDLE REGULAR | | | | | | |
| MATERIAL SPECIFICATION | | :- | | | | | | |
| CORROSION SPECIFICATION | | :- SANS 121 | | | | | | |
| STANDARD SPECIFICATION | | :- ASTM A 370-77: SANS 1700-2-6:1996: SANS 1700-3-2:1996: SABS ISO 1461:2000: ISO general purpose metric screw threads:. | | | | | | |
| ESKOM SPECIFICATION | | :- 240-75883140 | | | | | | |
| TEST & CERTIFICATION REQUIREMENTS | | :- TYPE SAMPLE AND ROUTINE TESTS AS PER SPEC. 240-75883140 | | | | | | |
| INSPECTION | | Yes | No | ESKOM RELEASE NOTE | | Yes | No | |
| IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS | | | | | | | | |
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | |
| REV | REVISION DESCRIPTION | | | BY | CHKD | AUTH | DATE | REF. DWGS |
| AUTH: | | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE | | SAP No: | |
| CHKD: | | | DATE: | | NTS | | 0168509 | |
| DRAWN: | | A.STEWART | DATE: | 02.11.1992 | CAD REF: | | | |
| | | | | | SERIES 3000 | | SET | |
| | | | | | FILE No: | | SHEET | |
| | | | | | 3050 | | REV | |
| | | | | | D-DT-3050 | | 7 | |
| | | | | | | | 1 | |
| | | | | | | | 25 | |



NOTE:

1. REQUIRED FOR FORGED AND NON-FORGED UNITS.
2. THREADS TO BE CHAMFERED BOTH ENDS 2.5x45° AND TO BE CUT AT RIGHT ANGLE.

| | |
|--------------------|------------------------------------|
| SAP MATERIAL No.: | 0168499 |
| SHORT DESCRIPTION: | SPINDLE LONG M20x300 REGULAR D3050 |

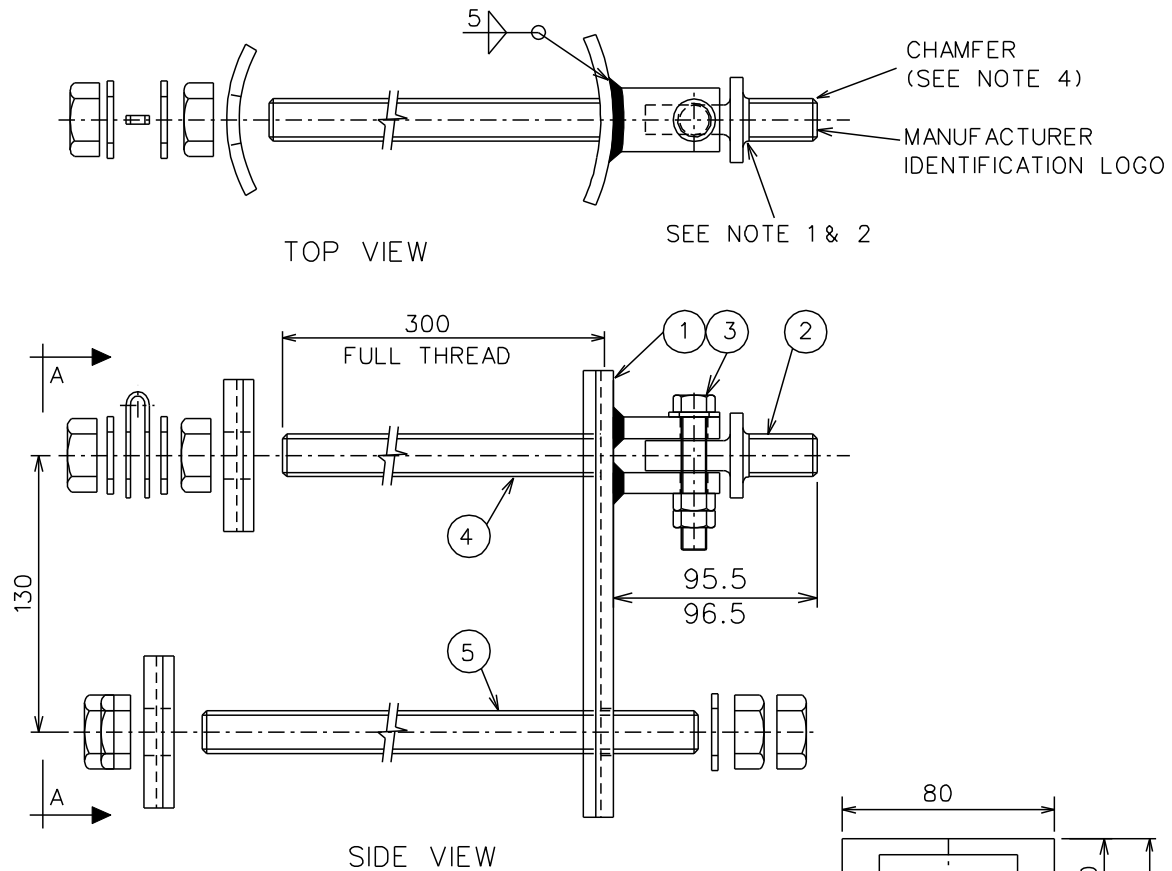
TECH. DESCRIPTION:

INSULATOR SPINDLE LONG * SHANK THREAD AND LENGTH
M20 x 2.5-6g (0.38 OVERSIZE) x 300mm (150mm MIN. THREAD LENGTH)
(THREAD TO BE CUT AT RIGHT ANGLES) *
INSULATOR INSERT THREAD M20 x 2.5-6g (0.38 OVERSIZE) x 35 ±2mm
(THREAD TO BE CUT AT RIGHT ANGLES) *
SPINDLE TO HAVE ROUND COLLAR AT 90 DEGREES SQUARED ON
TWO SIDES TO TAKE 30mm WRENCH *
COMPLETE WITH :
TWO M20 CURVED WASHER, THREE M20 FLAT ROUND WASHER AND
ONE SPRING WASHER (D-DT-3014),
ONE M20 BONDING CLIP (D-DT-3033) AND TWO M20 HEXAGON NUTS (D-DT-3173)
(ALL NUTS, WASHERS ETC. TO BE RUN ONTO THREAD 100mm) *
THREAD TO BE SMOOTHED WITH NUT PRIOR TO DELIVERY *
ESKOM DRAWING No. D-DT-3050 *

| | | | | | | |
|--------|--|--------|---------------|-------------|------------|-----------|
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | P.A.T. | B. HILL | B. HILL | 03.11.2014 | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | P.A.T. | B. HILL | B. HILL | 07.03.2014 | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | |
| REV | REVISION DESCRIPTION | BY | CHKD | AUTH | DATE | REF. DWGS |
| AUTH: | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE | SAP No: | |
| | | | | NTS | 0168499 | |
| CHKD: | | DATE: | | CAD REF: | SET | SHEET |
| | | | | SERIES 3000 | 7 | 2 |
| DRAWN: | A.STEWART | DATE: | 02.11.1992 | FILE No: | REV | |
| | | | | 3050 | 25 | |

SPEC SHEET


| | | | | | | | | | |
|--|--|-------|--------------------|--|---------|------------|-----------|-------|-----|
| SAP MATERIAL No.: | 0168671 | | | | | | | | |
| SHORT DESCRIPTION: | SPINDLE SWIVEL M20x300 REGULAR D3050 | | | | | | | | |
| TECH. DESCRIPTION: | | | | | | | | | |
| <p>SWIVEL SPINDLE * GRADE S355JR/350WA STEEL *</p> <p>HOT DIPPED GALVANISED *</p> <p>ITEM 1 - SPINDLE TO HAVE CURVED COLLAR 80 x 210 x 6mm AT 90 DEG. SQUARED TO TAKE 30mm WRENCH AND WELDED TOGETHER WITH 5mm CONTINUOUS SEAL WELD TO CONFORM TO SANS 0162-11 *</p> <p>ITEM 2 - INSULATOR INSERT THREAD M20 x 2,5-6g (0.38 OVERSIZE) x 35+2mm *</p> <p>ITEM 3 - 1 x M12 x 65mm LONG SET SCREW COMPLETE WITH 1 x M16 ROUND WASHER (D-DT-3014) AND 2 x M16 HEXAGON NUTS *</p> <p>ITEM 4 - SHANK THREAD AND LENGTH M20 x 2,5-6g (0.38 OVERSIZE) x 300mm (300mm THREAD LENGTH) WELDED TO COLLAR (ITEM 1) *</p> <p>SPINDLE SUPPLIED COMPLETE WITH ITEM 5 - 1 x M20 x 350mm THREADED ROD (D-DT-3015), 2 x M20 CURVED WASHER (D-DT-3014), 3 x M20 FLAT SQUARE WASHER (D-DT-3014), 1 x M20 BONDING CLIP (D-DT-3033) AND 6 x M20 HEXAGON NUTS (D-DT-3173) (ALL NUTS, WASHERS ETC. TO BE RUN ONTO THREAD 200mm) *</p> <p>THREAD TO BE SMOOTHED WITH NUT PRIOR TO DELIVERY *</p> <p>SPINDLE TO TAKE 4kN ULTIMATE LOAD WITH 4kN INSULATOR ON SPINDLE *</p> <p>ESKOM DRAWING No. D-DT-3050 *</p> | | | | | | | | | |
| ITEM | :- SWIVEL SPINDLES | | | | | | | | |
| MATERIAL SPECIFICATION | :- EN 10025-2 / SANS 1431 | | | | | | | | |
| CORROSION SPECIFICATION | :- SANS 121 | | | | | | | | |
| STANDARD SPECIFICATION | :- | | | | | | | | |
| ESKOM SPECIFICATION | :- 34-1649, 34-2051 | | | | | | | | |
| TEST & CERTIFICATION REQUIREMENTS :- TYPE SAMPLE AND ROUTINE TESTS AS PER SPEC. 34-1649, 34-2051 | | | | | | | | | |
| INSPECTION | Yes | No | ESKOM RELEASE NOTE | | | Yes | No | | |
| IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS | | | | | | | | | |
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | | | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | | | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | | | |
| REV | REVISION DESCRIPTION | | BY | CHKD | AUTH | DATE | REF. DWGS | | |
| AUTH: | S.A.CILLIERS | DATE: | MARCH 1992 |  D-DT-3050 | | SAP No: | | | |
| CHKD: | | DATE: | | | | 0168671 | | | |
| DRAWN: | A.STEWART | DATE: | 02.11.1992 | | | SET | | SHEET | REV |
| | | | | | | 7 | 3 | 25 | |

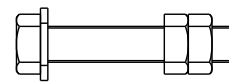
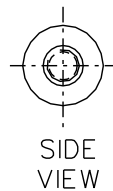


NOTE:

1. MAXIMUM UNTHREADED LENGTH OF 5mm ALLOWED.
2. MATERIAL UNDERCUT TO ALLOW A NUT TO SCREW FLUSH ONTO THE COLLAR.
3. SWIVEL SPINDLE TO BE FITTED TO WOODEN POLE WITH TWO 22mm DIAMETER HOLES DRILLED 130mm APART.
4. THREAD TO BE CHAMFERED BOTH ENDS 2.5x45° AND TO BE CUT AT RIGH ANGLES.


M20 x 300 SWIVEL SPINDLE ASSEMBLY

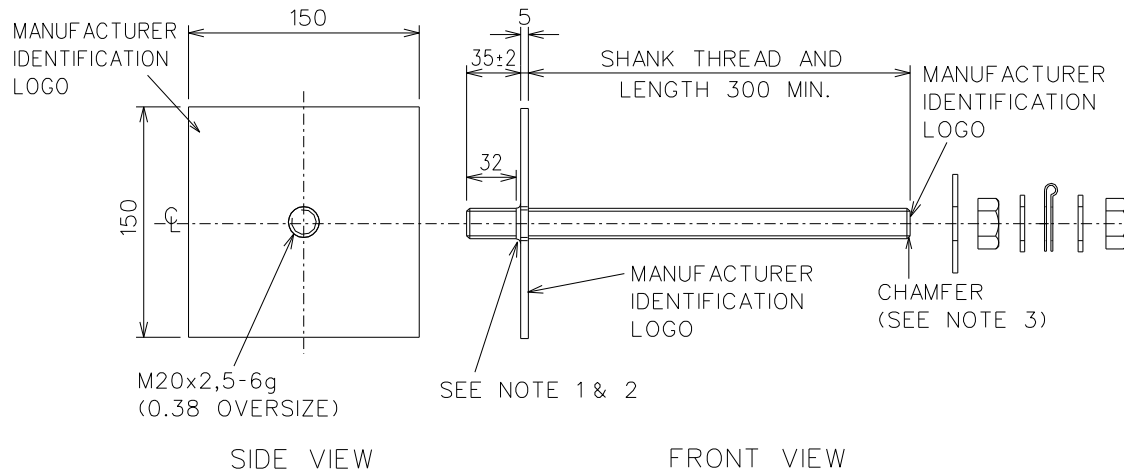
| | | | | | | | | | |
|--------|--|-------|---------------|-------------------------|--|---------|------------|-----------|-----|
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | | |
| REV | REVISION DESCRIPTION | | | BY | CHKD | AUTH | DATE | REF. DWGS | |
| AUTH: | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE NTS |  D-DT-3050 | | SAP No: | | |
| CHKD: | | DATE: | | CAD REF: SERIES 3000 | | | 0168671 | | |
| DRAWN: | A.STEWART | DATE: | 02.11.1992 | FILE No: 3050 | | | SET | SHEET | REV |
| | | | | | | | 7 | 4 | 25 |



M12 x 65 SET SCREW
COMPLETE WITH
1 WASHER AND
2 HEX. NUTS

ITEM 3

| | | | | | | | | | |
|--------|--|--------------|-------|------------|-------------|---------|---|--|-----------|
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | | |
| REV | REVISION DESCRIPTION | | | BY | CHKD | AUTH | DATE | | REF. DWGS |
| AUTH: | | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE | | <div></div> <div>SAP No:</div> <div>0168671</div> <div></div> | | |
| | | | | NTS | | | | | |
| CHKD: | | | DATE: | | CAD REF: | | | | |
| | | | | | SERIES 3000 | | | | |
| DRAWN: | | A.STEWART | DATE: | 02.11.1992 | FILE No: | | <div>D-DT-3050</div> <div>SET</div> <div>SHEET</div> <div>REV</div> | | |
| | | | | | 3050 | | | | |



NOTE: (REQUIRED FOR FORGED AND NON-FORGED UNITS)

1. MAXIMUM UNTHREADED LENGTH OF 5mm ALLOWED.

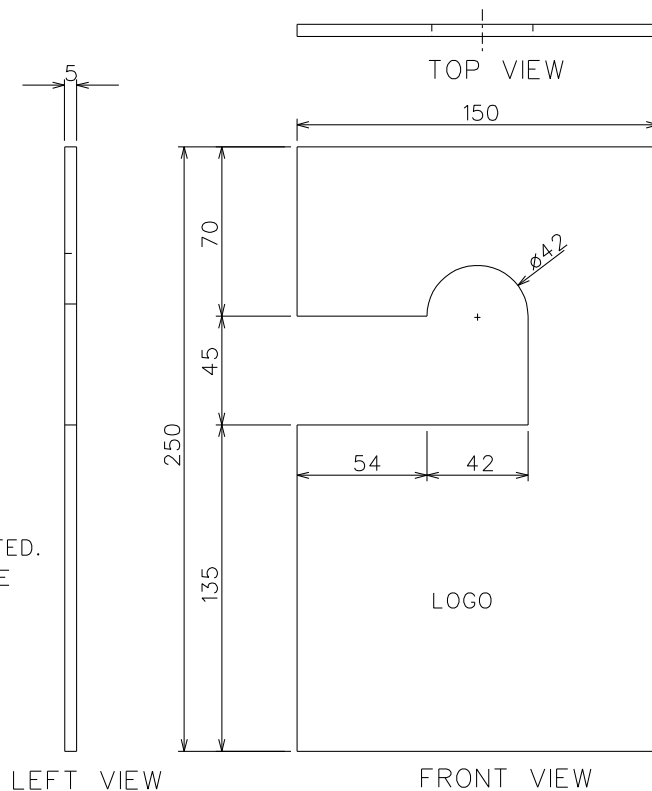
2. MATERIAL UNDERCUT TO ALLOW A NUT TO SCREW FLUSH ONTO THE COLLAR.


3. THREAD TO BE CHAMFERED BOTH ENDS $2.5 \times 45^\circ$ AND TO BE CUT AT RIGHT ANGLES.

| | | | | | | | | |
|---|--|--|---------------|-------------------------|------------|---|------------|-----------|
| SAP MATERIAL No.: | | 0215210 | | | | | | |
| SHORT DESCRIPTION: | | SPINDLE M20x300 CONC D3050 | | | | | | |
| TECH. DESCRIPTION: | | | | | | | | |
| INSULATOR SPINDLE * SHANK THREAD AND LENGTH M20 x 2.5-6g (0.38 OVERSIZE) x 300mm (MIN.) * INSULATOR INSERT THREAD M20 x 2.5-6g (0.38 OVERSIZE) x 35 +2mm * SPINDLE TO HAVE 150 x 150 x 5mm COLLAR AT 90 DEGREES SQUARED * COMPLETE WITH : ONE M20 FLAT SQUARE WASHER AND TWO M20 FLAT ROUND WASHER (D-DT-3014), ONE M20 BONDING CLIP (D-DT-3033) AND TWO M20 HEXAGON NUTS (D-DT-3173) (ALL NUTS, WASHERS ETC. TO BE RUN ONTO THREAD 300mm) * THREAD TO BE SMOOTHED WITH NUT PRIOR TO DELIVERY * USED ON CONCRETE POLES * ESKOM DRAWING No. D-DT-3050 * | | | | | | | | |
| ITEM | | :- SPINDLE CONCRETE POLE | | | | | | |
| MATERIAL SPECIFICATION | | :- | | | | | | |
| CORROSION SPECIFICATION | | :- SANS 121 | | | | | | |
| STANDARD SPECIFICATION | | :- | | | | | | |
| ESKOM SPECIFICATION | | :- 34-1649 | | | | | | |
| TEST & CERTIFICATION REQUIREMENTS | | :- TYPE SAMPLE AND ROUTINE TESTS AS PER SPEC. 34-1649 | | | | | | |
| INSPECTION | | Yes | No | ESKOM RELEASE NOTE | | Yes | No | |
| IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS | | | | | | | | |
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | |
| REV | REVISION DESCRIPTION | | | BY | CHKD | AUTH | DATE | REF. DWGS |
| AUTH: | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE NTS | | <div> Eskom</div> <div>D-DT-3050</div> | | |
| CHKD: | | DATE: | | CAD REF: SERIES 3000 | | | | |
| DRAWN: | A.STEWART | DATE: | 02.11.1992 | FILE No: 3050 | | SET | SHEET | REV |
| | | | | | | 7 | 6 | 25 |

NOTE :

1. THIS DESIGN HAS BEEN TESTED.
ALL OTHER DESIGNS MUST BE
TESTED AND APPROVED
BEFORE MANUFACTURE.
2. MANUFACTURER ID/LOGO
TO APPEAR ON WASHER.



| | | | | | | | | |
|---|--|---|---------------|--|------------|---------|------------|-----------|
| SAP MATERIAL No.: | | 0210675 | | | | | | |
| SHORT DESCRIPTION: | | BRACKET,INSUL WOOD INTERFACE D3050 | | | | | | |
| TECH. DESCRIPTION: | | | | | | | | |
| INSULATOR INTERFACE BRACKET * GRADE S355JR/350WA STEEL * | | | | | | | | |
| HOT DIPPED GALVANISED * | | | | | | | | |
| MATERIAL : 150 x 250 x 5mm THICK FLAT PLATE | | | | | | | | |
| (SEE DRAWING FOR CUT-OUT) * | | | | | | | | |
| USED TO REINFORCE INSULATOR BASE ON WOOD POLES) * | | | | | | | | |
| ESKOM DRAWING No. D-DT-3050 * | | | | | | | | |
| | | | | | | | | |
| ITEM | | :- BRACKET,INTERFACE WOOD TO INSULATOR | | | | | | |
| MATERIAL SPECIFICATION | | :- EN 10025-2 / SANS 1431 | | | | | | |
| CORROSION SPECIFICATION | | :- SANS 121 | | | | | | |
| STANDARD SPECIFICATION | | :- | | | | | | |
| ESKOM SPECIFICATION | | :- D-DT-3050 | | | | | | |
| TEST & CERTIFICATION REQUIREMENTS | | :- DESIGN AND TESTS TO WITHSTAND 4kN WORKING LOAD AND 10kN ULTIMATE LOAD | | | | | | |
| INSPECTION | | Yes | No | ESKOM RELEASE NOTE | | Yes | No | |
| IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS | | | | | | | | |
| 25 | NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES | | | P.A.T. | B. HILL | B. HILL | 03.11.2014 | |
| 24 | CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050 | | | P.A.T. | B. HILL | B. HILL | 07.03.2014 | |
| 23 | SH.5 - ITEM 5 LENGTH CORRECTED FROM 300 TO 350mm AS PER BUYERS GUIDE THREADED RODS M20x350 AVAILABLE | | | P.A.T. | S. MASHABA | B. HILL | 31.10.2011 | |
| REV | REVISION DESCRIPTION | | | BY | CHKD | AUTH | DATE | REF. DWGS |
| AUTH: | S.A.CILLIERS | DATE: | MARCH 1992 | SCALE | | SAP No: | | |
| | | | | NTS | | | | |
| CHKD: | | DATE: | | CAD REF: | | 0210675 | | |
| | | | | SERIES 3000 | | SET | | SHEET |
| DRAWN: | A.STEWART | DATE: | 02.11.1992 | FILE No: | | 7 | | 7 |
| | | | | 3050 | | | | 25 |
| | | | |  D-DT-3050 | | | | |
| | | | | | | | | |