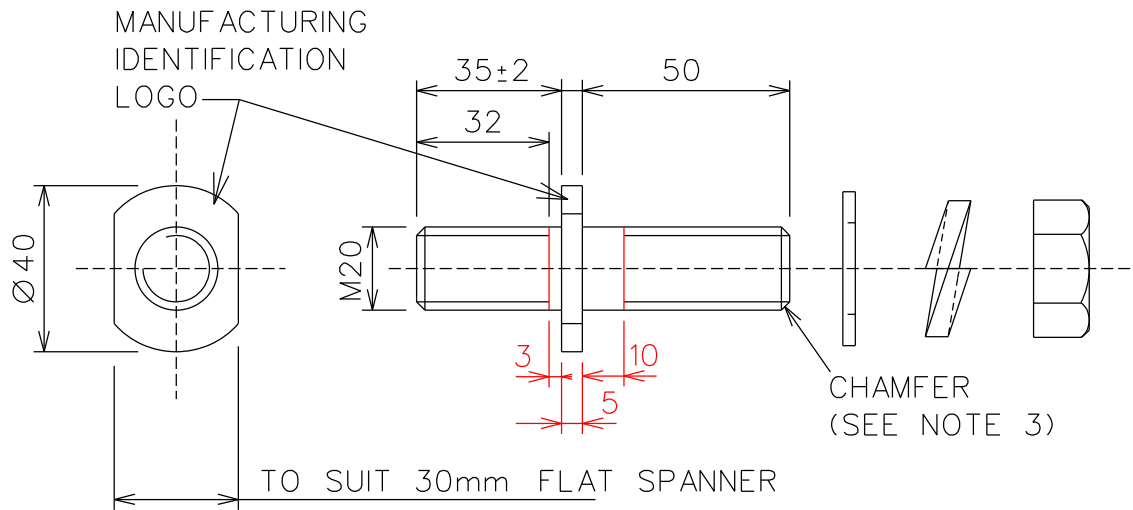
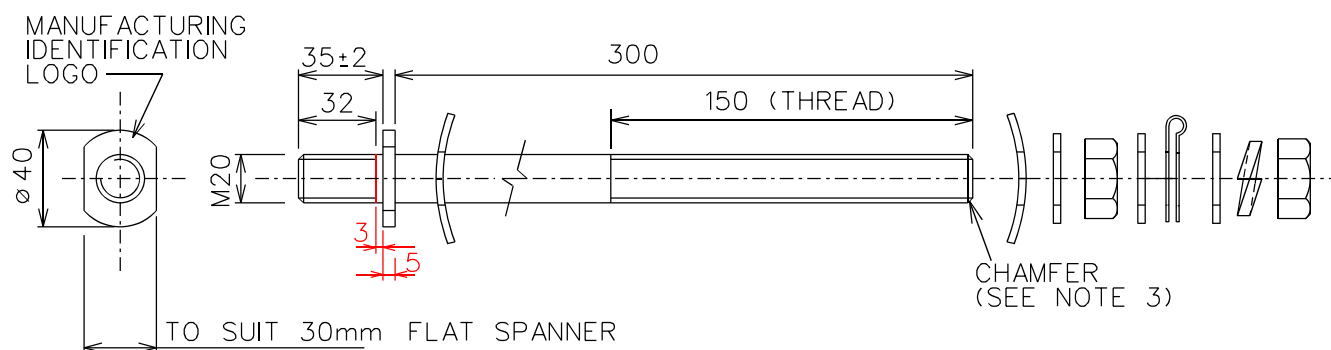




NOTE:
(REQUIRED FOR FORGED AND NON-FORGED UNITS)

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		 Eskom		0168509	
				CAD REF:					
DRAWN:	A.STEWART	DATE:	02.11.1992	SERIES 3000		SET		SHEET	REV
				FILE No:		7		1	25
				3050		D-DT-3050			



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

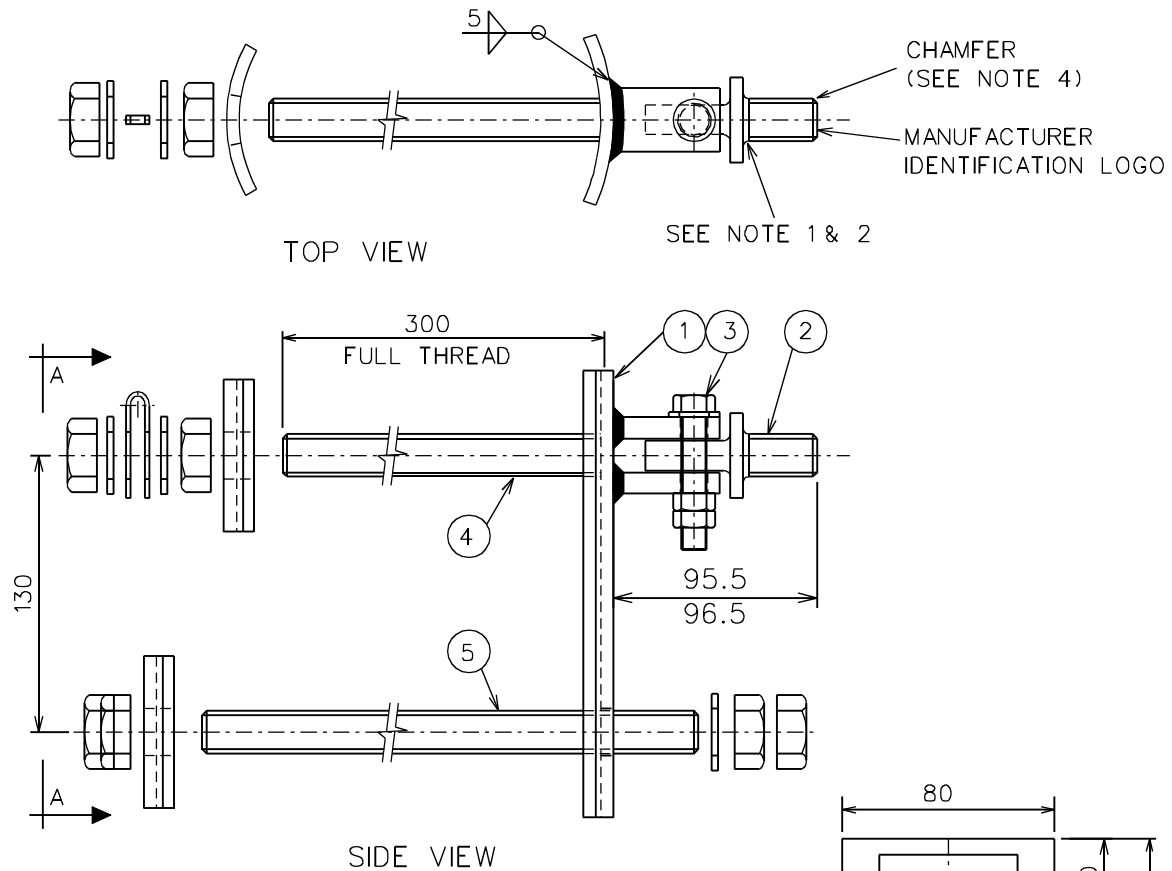
TECH. DESCRIPTION:

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	Eskom D-DT-3050		SAP No:					
CHKD:		DATE:			0168499								
DRAWN:		A.STEWART		DATE:				02.11.1992		SET		SHEET	REV
										7		2	

SPEC SHEET

SAP MATERIAL No.:	0168671							
SHORT DESCRIPTION:	SPINDLE SWIVEL M20x300 REGULAR D3050							
TECH. DESCRIPTION:								
SWIVEL SPINDLE * GRADE S355JR/350WA STEEL * HOT DIPPED GALVANISED * 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 * ITEM 2 - INSULATOR INSERT THREAD M20 x 2,5-6g (0.38 OVERSIZE) x 35+2mm * ITEM 3 - 1 x M12 x 65mm LONG SET SCREW COMPLETE WITH 1 x M16 ROUND WASHER (D-DT-3014) AND 2 x M16 HEXIGON NUTS * ITEM 4 - SHANK THREAD AND LENGTH M20 x 2,5-6g (0.38 OVERSIZE) x 300mm (300mm THREAD LENGTH) WELDED TO COLLAR (ITEM 1) * 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) * THREAD TO BE SMOOTHED WITH NUT PRIOR TO DELIVERY * SPINDLE TO TAKE 4kN ULTIMATE LOAD WITH 4kN INSULATOR ON SPINDLE * ESKOM DRAWING No. D-DT-3050 *								
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		
						SET	SHEET	REV
DRAWN:	A.STEWART	DATE:	02.11.1992			7	3	25

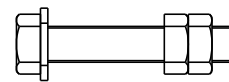


NOTE:

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

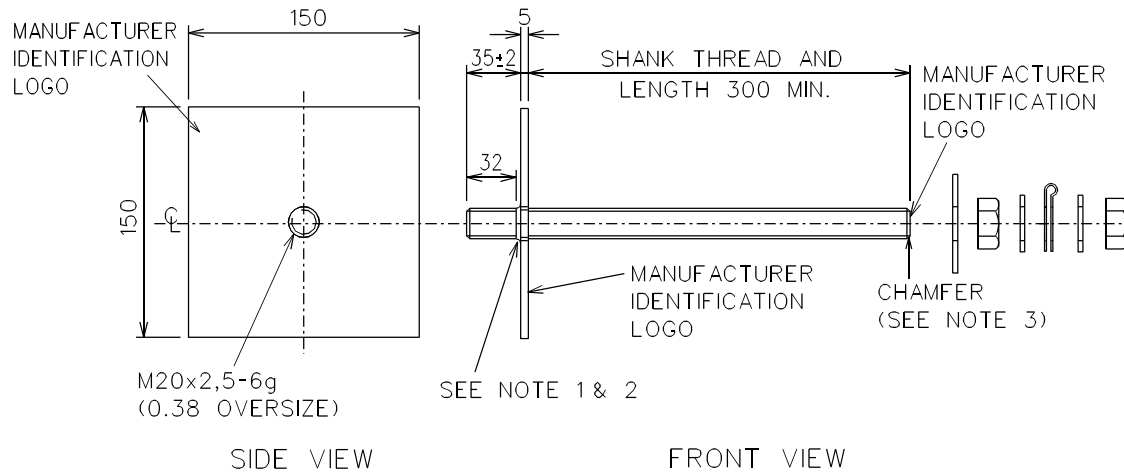
25	NON-THREADED SECTION ADDED TO REGULAR SPENDLES AND NOTES CHANGED ON REGULAR SPENDLES	P.A.T.	B. HILL	B. HILL	03.11.2014	
24	CURVED, FLAT & SPRING WASHERS ADDED FOR WOOD POLE APPLICATIONS AND RATCHET SPINDLES MOVED TO D-DT-2050	P.A.T.	B. HILL	B. HILL	07.03.2014	
23	SH.5 - ITEM 5 LENGTH CORRECTED FROM 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			SAP No:
CHKD:		DATE:				0168671
DRAWN:	A.STEWART	DATE:	02.11.1992	D-DT-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 NTS			SAP No:		
CHKD:		DATE:		CAD REF: SERIES 3000			0168671		
DRAWN:	A.STEWART	DATE:	02.11.1992	FILE No: 3050	D-DT-3050		SET	SHEET	REV
							7	5	25



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

1. MAXIMUM UNTHREADED LENGTH OF 5mm ALLOWED.

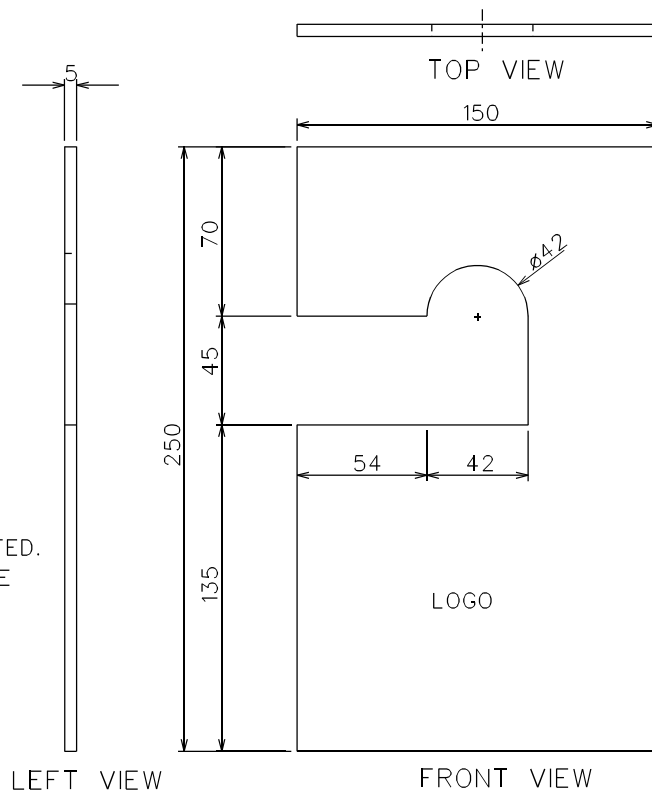
2. MATERIAL UNDERCUT TO ALLOW A NUT TO SCREW FLUSH ONTO THE COLLAR.

3. THREAD TO BE CHAMFERED BOTH ENDS 2.5x45° 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				SAP No:		
CHKD:		DATE:		CAD REF: SERIES 3000				0215210		
DRAWN:	A.STEWART	DATE:	02.11.1992	FILE No: 3050		D-DT-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 NTS		 Eskom		SAP No:		
CHKD:		DATE:		CAD REF: SERIES 3000				0210675		
DRAWN:	A.STEWART	DATE:	02.11.1992	FILE No: 3050		D-DT-3050		SET	SHEET	REV
								7	7	25