

Title: **ESKOM TRANSMISSION LIST OF PRE-APPROVED HV EQUIPMENT** Unique Identifier: **240-180200051**

Alternative Reference Number: **n/a**

Area of Applicability: **Engineering**

Documentation Type: **Manual**

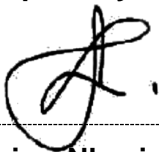
Revision: **1**

Total Pages: **84**

Next Review Date: **September 2028**

Disclosure Classification: **Controlled Disclosure**

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PCM Reference: **240-53459006**

SCOT Study Committee Number/Name: **Plant Equipment Study Committee**

## **Executive Summary**

This document consists of the standard Eskom Transmission list of pre-approved HV equipment that are meant for use by the Contractor appointed by Eskom Transmission on the Self-build and EPC's (including turnkey project(s)) when they are choosing and selecting the material to be used to build the substation(s) or infrastructure. This list is in accordance with the 240-180000668, STANDARD ON HOW CONTRACTORS CAN SELECT MATERIAL TO USE TO BUILD THE SUBSTATIONS or INFRASTRUCTURE ON THE SELF-BUILD or EPC.

The list shall be maintained up to date, and regularly revised as and when the new entry HV equipment that has been evaluated and approved by Eskom Transmission is concluded.

## 1. Introduction

This is the Eskom Transmission List of pre-approved HV Equipment

Abbreviation	Description
STATCOM	Static Synchronous Compensator
SVC	Static Var Compensator
TCR	Thyristor Controlled Reactor
TSC	Thyristor Switched Capacitor
Tx	Transmission
VSC	Voltage Source Converter
VT	Voltage Transformer
CT	Current Transformer
CVT	Capacitive Voltage Transformer
EPC	Engineer, Procure, and Construct
Eskom	Eskom Holdings SOC (Ltd)
FACTS	Flexible AC Transmission Systems
GIS	Gas Insulated Switchgear
HV	High Voltage
HVDC	High Voltage Direct Current
SE&D (SED)	Substation Equipment & Diagnostics

## 2. Eskom Transmission List of pre-approved HV equipment

Below is the Eskom Transmission List of pre-approved HV Equipment. This is compiled per HV equipment, and each has its own detailed annexure.

### 2.1 Surge Arrestors

Below is the list of the pre-approved Surge Arrestors (SA's).

For **Surge Arresters**, the following Suppliers (OEMs) are technically approved for use, only for the specific items listed in the further table:

	Supplier in South Africa	OEM (Country) Voltage Range
1	<i>Actom</i>	<i>Nanyang</i> Jinniu Electric (China) <b>6.6-132kV</b> <i>Xian XD</i> Arrester (China) <b>220-765kV</b>
2	<i>Hitachi Energy SA</i>	<i>Hitachi ABB</i> Power Grids (Sweden) <b>6.6-765kV</b>
3	<i>Fezusha Investments</i>	<i>Nanyang</i> Jinniu Electric (China) <b>6.6-33kV</b> <i>ABB Xiamen</i> Surge Arrester (China) <b>44-275kV</b> <i>Fushun Electric</i> Porcelain Manufacturing (China) <b>400 &amp; 765kV</b>
4	<i>Siemens SA</i>	<i>Siemens</i> (China) <b>6.6-400kV non-LB</b> <i>Siemens</i> (Germany) <b>400(LB)-765kV</b>

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5	e-Lek engineering	Cooper Power Systems (USA) 6.6-132kV
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*The following key was used in the Table below;*

✓	Pass Technical requirements
	Do not pass Technical requirements

	Supplier	Actom	Hitachi	Fezusha	Siemens	e-Lek
SAP no.	Item name					
401603	6.6 kV Nominal Voltage Non-Effectively earthed 31mm/kV			✓	✓	✓
401605	11 kV Nominal Voltage Non-Effectively earthed 31mm/kV			✓	✓	✓
400391	22 kV Nominal Voltage Non-Effectively earthed 31mm/kV			✓	✓	✓
400398	33 kV Nominal Voltage Non-Effectively earthed 31mm/kV			✓	✓	✓
685420	44 kV Nominal Voltage Non-Effectively earthed 31mm/kV	✓	✓	✓	✓	✓
623049	44 kV Nominal Voltage Effectively earthed 31mm/kV				✓	✓
685426	66 kV Nominal Voltage Non-Effectively earthed 31mm/kV		✓	✓		✓
401595	66 kV Nominal Voltage Effectively earthed 31mm/kV		✓		✓	✓
685440	88 kV Nominal Voltage Non-Effectively earthed 31mm/kV		✓	✓	✓	✓
187621	88 kV Nominal Voltage Effectively earthed 31mm/kV		✓		✓	✓
690742	132 kV Nominal Voltage, Class 3 31mm/kV	✓	✓	✓	✓	✓
685444	132 kV Nominal Voltage, Class 3 31mm/kV and mechanical load bearing	✓	✓	✓	✓	
685445	132 kV Nominal Voltage, Class 3 31mm/kV Transformer application with max 160mm diameter grading ring		✓	✓	✓	
623035	220 kV Nominal Voltage 25mm/kV and mechanical load bearing	✓	✓	✓	✓	
623036	220 kV Nominal Voltage 31mm/kV and mechanical load bearing	✓	✓	✓	✓	
222299	275 kV Nominal Voltage 25mm/kV	✓	✓	✓	✓	
222300	275 kV Nominal Voltage 31mm/kV	✓	✓	✓	✓	

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623037	275 kV Nominal Voltage 25mm/kV and mechanical load bearing	✓	✓	✓	✓	
623038	275 kV Nominal Voltage 31mm/kV and mechanical load bearing	✓	✓	✓	✓	
4606	400 kV Nominal Voltage 25mm/kV	✓	✓		✓	
222301	400 kV Nominal Voltage 31mm/kV	✓	✓		✓	
623039	400 kV Nominal Voltage 25mm/kV and mechanical load bearing	✓	✓		✓	
623041	400 kV Nominal Voltage 31mm/kV and mechanical load bearing	✓	✓		✓	
623048	400 kV Nominal Voltage Extreme Pollution Environment and mechanical load bearing	✓	✓		✓	
401313	765 kV Nominal Voltage 25mm/kV	✓	✓		✓	
224330	765 kV Nominal Voltage 31mm/kV	✓	✓	✓	✓	

NOTE: *For any of the above equipment, whether Pls or SAs, that does not have an Eskom 0.54/XXXXX drawing number, one will be generated by the specialist. (This process is speedy!)*

## 2.2 Station Post Insulators

Below is the list of the pre-approved Station Post Insulators (SPI's).

For **Post Insulators**, the following Suppliers and OEMs can supply the entire range of post insulators, and had been technically approved previously to supply Eskom.

OEM name	Dalian Insulator Group	PPC Insulators	Suzhou Porcelain Insulator Works	Modern Insulators
OEM country	China	Slovakia	China	India
Local Supplier(s)	<b>Lesedi Reticulation</b>	<b>MegaHVT and/or ACTOM</b>	<b>ACTOM and/or MegaHVT</b>	<b>ACTOM and/or MegaHVT</b>
Range of supply	All Items	All Items	All Items	All Items

Material Number	Description
523602	INSUL:STN POST;C10-1050;275 KV C10-1050
523605	INSUL:STN POST;C10-1175;275 KV C10-1175
523607	INSUL:STN POST;C10-1425;400 KV C10-1425
523600	INSUL:STN POST;C10-550;132 KV C10-550
523606	INSUL:STN POST;C12.5-1175;275 KV C12.5-1175
523610	INSUL:STN POST;C12.5-1550;400 KV C12.5-1550
523601	INSUL:STN POST;C12.5-550;132 KV C12.5-550
523604	INSUL:STN POST;C4-1175;275 KV
17527	INSUL:STN POST;C4-325;66 KV C4-325
10439	INSUL,POST 66KV EP315 TYPE C4-325
17528	INSUL:STN POST;C4-550;132 KV C4-550
523608	INSUL:STN POST;C6-1550;400 KV
523599	INSUL:STN POST;C6-550;132 KV C6-550
523612	INSUL:STN POST;C8-2100;765 KV C8-2100
400525	INSUL:C10-1550;POST;PORCELAIN;400 KV
17529	INSUL-STN POST;C4-150 22KV
182646	INSUL-STN POST;C4-200 33KV

NOTE: *For any of the above equipment, whether Pls or SAs, that does not have an Eskom 0.54/XXXXX drawing number, one will be generated by the specialist. (This process is speedy!)*

## 2.3 Current Transformers

Below are the lists of the pre-approved Current Transformers (CT's).

### 2.3.1 CT's – up to 132 kV

Below is the list of the pre-approved CT's (CT's) for voltages up to 132 kV.

Contract no: 4600067631 (15 May 2020 - 14 Apr 2024)			
Supplier / OEM	Actom / Actom	Lawrence Tel: 011 820 5013 Mobile: 066 184 9480 email: lawrence.dlamini@actom.co.za	Dlamini
SAP No	Eskom Drawing No:	Current Transformer Short Description	
180087	0.54/9783	CT 22kV 1600A 25kA 2P2M 31mm/kV	
180088	0.54/9784	CT 22kV 2500A 25kA 2P2M 31mm/kV	
180038	0.54/9785	CT 33kV 1600A 31.5kA 2P2M 31mm/kV	
180035	0.54/9786	CT 66kV 1600A 31.5kA 2P2M2B5 31mm/kV	
180037	0.54/9787	CT 66kV 1600A 31.5kA 2P 2M 2B10/12/16 31mm/kV	
675092	TBD	CT 66kV 200A 20kA 2M 31mm/kV	
180031	0.54/9790	CT 132kV 2500A 40kA 2P2M2B(500) 31mm/kV	
180034	0.54/9791	CT 132kV 2500A 40kA 2P 2M 2B10/12/16 31mm/kV	

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257374	0.54/9792	CT 132kV 2500A 40kA 2P2M2B24 31mm/kV
216835	0.54/9793	CT 132kV 2500A 40KA 3P1M2B2431mm/kV
243900	0.54/9794	CT 132kV 2500A 40kA 2P2M2B16 31mm/kV
217028	0.54/9795	CT 132kV 2500A 40kA 3P1M2B16 31mm/kV
243902	0.54/9796	CT 132kV 2500A 40kA 2P2M2B12 31mm/kV
630597	0.54/9797	CT 132kV 2500A 40kA 3P1M2B12 31mm/kV
675093	TBD	CT 132kV 200A 20kA 2M 31mm/kV

Contract No: N/A		
<b>Supplier / OEM</b>	HVT SA / Trench (China)	Neelan Tel: 011 316 7873 Mobile: 073 627 2936 email: neelan@hvt.co.za Naidoo
<b>SAP NO.</b>	<b>Eskom Dr No</b>	<b>Current Transformer Short Description</b>
180037	0.54/9601	CT 66kV 1600A 31.5kA 2P 2M 2B10/12/16 31mm/kV
180035	0.54/9602	CT 66kV 1600A 31.5kA 2P2M2B500 31mm/kV
257376	TBD	CT 66kV 200A 10kA 2M 31mm/kV
257374	0.54/9603	CT 132kV 2500A 40kA 2P2M2B24 31mm/kV
216835	TBD	CT 132kV 2500A 40KA 3P1M2B2431mm/kV
186642 / 243900	TBD	CT 132kV 2500A 40kA 2P2M2B16 31mm/kV
217028	TBD	CT 132kV 2500A 40kA 3P1M2B16 31mm/kV
243902	0.54/9606	CT 132kV 2500A 40kA 2P2M2B12 31mm/kV
402216 / 630597	0.54/9607	CT 132kV 2500A 40kA 3P1M2B12 31mm/kV
180031	TBD	CT 132kV 2500A 40kA 2P2M2B(500) 31mm/kV
180034	0.54/9609	CT 132kV 2500A 40kA 2P 2M 2B10/12/16 31mm/kV
212628	0.54/9610	CT 132kV 2500A 40kA 3P 1M 2B10/12/16 31mm/kV
257375	TBD	CT 132kV 200A 10kA 2M 31mm/kV

### 2.3.2 CT's –above 132 kV

Below is the list of the pre-approved CT's (CT's) for voltages above 132 kV.

Contract No: N/A		
<b>Supplier / OEM</b>	HVT SA / Trench	Neelan Tel: 011 316 7873 Mobile: 073 627 2936 email:neelan@hvt.co.za Naidoo
<b>SAP NO.</b>	<b>Eskom Drawing No</b>	<b>Current Transformer Short Description</b>
639056	TBD	CT 275kV 2500A 50KA 2P32 2M32 2B24 31mm/kV
639057	TBD	CT 275kV 2500A 50KA 3P32 1M32 2B24 31mm/kV
639059	TBD	CT 275kV 2500A 50KA 2P24 2M24 2B16-24 31mm/kV
639060	TBD	CT 275kV 2500A 50KA 3P24 1M24 2B16-24 31mm/kV
639061	TBD	CT 275kV 2500A 50KA 2P24 2M24 2B12-16 31mm/kV

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639062	TBD	CT 275kV 2500A 50KA 3P24 1M24 2B12-16 31mm/kV
639032	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
8575	TBD	CT 275kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639066	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639067	TBD	CT 275kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639068	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B12-16 31mm/kV
639069	TBD	CT 275kV 3150A 50KA 3P32 1M32 2B12-16 31mm/kV
639096	TBD	CT 400kV 2500A 50KA 2P24 2M24 2B24 31mm/kV
639097	TBD	CT 400kV 2500A 50KA 3P24 1M24 2B24 31mm/kV
639098	TBD	CT 400kV 2500A 50KA 2P24 2M24 2B16/24 31mm/kV
639099	TBD	CT 400kV 2500A 50KA 3P24 1M24 2B16/24 31mm/kV
186755	TBD	CT 400kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
186754	TBD	CT 400kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639092	TBD	CT 400kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639093	TBD	CT 400kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639102	TBD	CT 400kV 4000A 63KA 4P 2M 25mm/kV
639103	TBD	CT 400kV 4000A 63KA 4P 2M 31mm/kV
8388	TBD	CT 400kV 3150A 50KA 2P32TPY 2M32 2B24 31mm/kV
639112	TBD	CT 400kV 4000A 63KA 2P32 2M32 2B24 31mm/kV
639164	TBD	CT 400kV 4000A 63KA 3P32 1M32 2B24 31mm/kV
403346	TBD	CT 765KV 3150A 50KA 4P2M 31 mm/kV
400484	TBD	CT 765KV 800A 50KA 2P1M 31mm/kV

Contract No: N/A		
<b>Supplier / OEM</b>	Mega HVT / Arteche	Phinias Tel: 011 314 8436 Mobile: 082 777 9521 email: phinias.kgori@za-megahvt.com
<b>SAP Number</b>	<b>Eskom Drawing No</b>	<b>Current Transformer Short Description</b>
639056	TBD	CT 275kV 2500A 50KA 2P32 2M32 2B24 31mm/kV
639057	TBD	CT 275kV 2500A 50KA 3P32 1M32 2B24 31mm/kV
639059	0.54/09525	CT 275kV 2500A 50KA 2P24 2M24 2B16-24 31mm/kV
639060	TBD	CT 275kV 2500A 50KA 3P24 1M24 2B16-24 31mm/kV
639061	0.54/09529	CT 275kV 2500A 50KA 2P24 2M24 2B12-16 31mm/kV
639062	0.54/09531	CT 275kV 2500A 50KA 3P24 1M24 2B12-16 31mm/kV
639032	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
8575	0.54/09535	CT 275kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639066	0.54/09537	CT 275kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639067	0.54/09539	CT 275kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639068	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B12-16 31mm/kV
639069	TBD	CT 275kV 3150A 50KA 3P32 1M32 2B12-16 31mm/kV
639096	TBD	CT 400kV 2500A 50KA 2P24 2M24 2B24 31mm/kV
639097	TBD	CT 400kV 2500A 50KA 3P24 1M24 2B24 31mm/kV

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639098	0.54/09554	CT 400kV 2500A 50KA 2P24 2M24 2B16/24 31mm/kV
639099	0.54/09556	CT 400kV 2500A 50KA 3P24 1M24 2B16/24 31mm/kV
186755	0.54/09561	CT 400kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
186754	0.54/09563	CT 400kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639092	0.54/09565	CT 400kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639093	TBD	CT 400kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639102	TBD	CT 400kV 4000A 63KA 4P 2M 25mm/kV
639103	TBD	CT 400kV 4000A 63KA 4P 2M 31mm/kV
8388	TBD	CT 400kV 3150A 50KA 2P32TPY 2M32 2B24 31mm/kV
639112	TBD	CT 400kV 4000A 63KA 2P32 2M32 2B24 31mm/kV
639164	TBD	CT 400kV 4000A 63KA 3P32 1M32 2B24 31mm/kV
403346	TBD	CT 765KV 3150A 50KA 4P2M 31 mm/kV
400484	TBD	CT 765KV 800A 50KA 2P1M 31mm/kV

Contract no: 4600064502 (01 June 2018 - 31 May 2024)		
<b>Supplier / OEM</b>	Actom / GE	Lawrence Dlamini Tel: 011 820 5013 Mobile: 066 184 9480 email: lawrence.dlamini@actom.co.za
<b>SAP Number</b>	<b>Eskom Drawing No</b>	<b>Current Transformer Short Description</b>
639056	TBD	CT 275kV 2500A 50KA 2P32 2M32 2B24 31mm/kV
639057	TBD	CT 275kV 2500A 50KA 3P32 1M32 2B24 31mm/kV
639059	TBD	CT 275kV 2500A 50KA 2P24 2M24 2B16-24 31mm/kV
639060	TBD	CT 275kV 2500A 50KA 3P24 1M24 2B16-24 31mm/kV
639061	0.54/9581	CT 275kV 2500A 50KA 2P24 2M24 2B12-16 31mm/kV
639062	0.54/9585	CT 275kV 2500A 50KA 3P24 1M24 2B12-16 31mm/kV
639032	0.54/9582	CT 275kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
8575	0.54/9584	CT 275kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639066	0.54/9583	CT 275kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639067	0.54/9580	CT 275kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639068	TBD	CT 275kV 3150A 50KA 2P32 2M32 2B12-16 31mm/kV
639069	TBD	CT 275kV 3150A 50KA 3P32 1M32 2B12-16 31mm/kV
640326	TBD	CT 275kV 200A 10KA 2M 31mm/kV
639096	TBD	CT 400kV 2500A 50KA 2P24 2M24 2B24 31mm/kV
639097	TBD	CT 400kV 2500A 50KA 3P24 1M24 2B24 31mm/kV
639098	TBD	CT 400kV 2500A 50KA 2P24 2M24 2B16/24 31mm/kV
639099	TBD	CT 400kV 2500A 50KA 3P24 1M24 2B16/24 31mm/kV
186755	TBD	CT 400kV 3150A 50KA 2P32 2M32 2B24 31mm/kV
186754	TBD	CT 400kV 3150A 50KA 3P32 1M32 2B24 31mm/kV
639092	TBD	CT 400kV 3150A 50KA 2P32 2M32 2B16-24 31mm/kV
639093	0.54/9567	CT 400kV 3150A 50KA 3P32 1M32 2B16-24 31mm/kV
639102	TBD	CT 400kV 4000A 63KA 4P 2M 25mm/kV
639103	TBD	CT 400kV 4000A 63KA 4P 2M 31mm/kV
8388	TBD	CT 400kV 3150A 50KA 2P32TPY 2M32 2B24 31mm/kV

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639112	TBD	CT 400kV 4000A 63KA 2P32 2M32 2B24 31mm/kV
639164	TBD	CT 400kV 4000A 63KA 3P32 1M32 2B24 31mm/kV
403346	TBD	CT 765KV 3150A 50KA 4P2M 31 mm/kV
400484	TBD	CT 765KV 800A 50KA 2P1M 31mm/kV

## 2.4 Voltage Transformers (Inductive)

Below is the list of the pre-approved Voltage Transformers (VT's)

Contract no: 4600067633 (15 May 2020 - 15 April 2024)			
<b>Supplier / OEM</b>	Actom / Actom	Lawrence Dlamini Tel: 011 820 5013 Mobile: 066 184 9480 email: lawrence.dlamini@actom.co.za	
<b>SAP NO.</b>	<b>Eskom Drawing No</b>	<b>Voltage Transformer Short Description</b>	
402187	0.54/9800	VT 1PH 6.6kV/110V 100/50VA 31	
243883	0.54/9801	VT 1PH 6.6KV/110V 200/100VA 31	
402185	0.54/9802	VT 1PH 11kV/110V 100/50VA 31	
243885	0.54/9803	VT 1PH 11KV/110V 200/100VA 31	
402179	0.54/9804	VT 1PH 22KV/110V 100/50VA 31	
243886	0.54/9805	VT 1PH 22KV/110V 200/100VA 31	
402183	0.54/9806	VT 1PH 33kV/110V 100/50VA 31	
243887	0.54/9807	VT 1PH 33KV/110V 200/100VA 31	
402181	0.54/9808	VT 1PH 44kV/110V 100/50VA 31	
243888	0.54/9809	VT 1PH 44KV/110V 200/100VA 31	
180091	0.54/9810	VT 1PH 66KV/110V 100/50VA 31	
243889	0.54/9811	VT 1PH 66KV/110V 200/100VA 31	
180090	0.54/9812	VT 1PH 88kV/110V 100/50VA 31	
243890	0.54/9813	VT 1PH 88KV/110V 200/100VA 31	
180089	0.54/9814	VT 1PH 132kV/110V 100/50VA 31	
243891	0.54/9815	VT 1PH 132KV/110V 200/100VA 31	

## 2.5 Capacitive Voltage Transformers

Below is the list of the pre-approved Capacitive Voltage Transformers (CVT's)

Contract No: 4600064507 (14 April 2018 - 15 April 2024)			
<b>Supplier / OEM</b>	Hitachi / Hitachi	Confidence Mabulwana Tel: 010 202 5000 Mobile: 078 421 6309 email: neelan@hvt.co.za	

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SAP NO.	Eskom Drawing No	Capacitor Voltage Transformer Short Description
9015	TBD	CVT 66kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
9017	TBD	CVT 88kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
637042	TBD	CVT 132kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
4282	TBD	CVT 220kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8546	TBD	CVT 275kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8544	TBD	CVT 400kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
637045	TBD	CVT 765kV/110V 2P1M 150/50VA (3PT1/0.2) 31mm/kV
<b>Contract No: N/A</b>		
<b>Supplier / OEM</b>	HVT SA / Trench	Neelan Naidoo Tel: 011 316 7873 Mobile: 073 627 2936 email: neelan@hvt.co.za
SAP NO.	Eskom Drawing No	Capacitor Voltage Transformer Short Description
9015	0.54/8812	CVT 66kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
9017	0.54/8810	CVT 88kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
637042	0.54/8808	CVT 132kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
4282	0.54/8806	CVT 220kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8546	0.54/8804	CVT 275kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8544	0.54/8802	CVT 400kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
637045	TBD	CVT 765kV/110V 2P1M 150/50VA (3PT1/0.2) 31mm/kV

<b>Contract No: N/A</b>		
<b>Supplier / OEM</b>	Mega HVT / Artech	Phinias Kgori Tel: 011 314 8436 Mobile: 082 777 9521 email: phinias.kgori@za-megahvt.com
SAP NO.	Eskom Drawing No	Capacitor Voltage Transformer Short Description
9015	TBD	CVT 66kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
9017	TBD	CVT 88kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
637042	0.54/9505	CVT 132kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
4282	TBD	CVT 220kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8546	0.54/9509	CVT 275kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8544	0.54/9511	CVT 400kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
637045	TBD	CVT 765kV/110V 2P1M 150/50VA (3PT1/0.2) 31mm/kV

<b>Contract no: 4600064502 (01 June 2018 - 31 May 2024)</b>		
<b>Supplier / OEM</b>	Actom / GE	Lawrence Dlamini Tel: 011 820 5013 Mobile: 066 184 9480 email: lawrence.dlamini@actom.co.za

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SAP NO.	Eskom Drawing No	Capacitor Voltage Transformer Short Description
9015	TBD	CVT 66kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
9017	TBD	CVT 88kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
637042	TBD	CVT 132kV/110V 1P1M 100/50VA (3P/0.2) 31mm/kV
4282	TBD	CVT 220kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8546	TBD	CVT 275kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
8544	TBD	CVT 400kV/110V 2P1M 150/50VA (3P/0.2) 31mm/kV
637045	TBD	CVT 765kV/110V 2P1M 150/50VA (3PT1/0.2) 31mm/kV

## 2.6 Line traps

Below is the list of the pre-approved outdoor Circuit-breakers (CB's).

Supplier / OEM	Actom / Actom	Lawrence Dlamini Tel: 011 820 5013 Mobile: 066 184 9480 email: lawrence.dlamini@actom.co.za	Contract no: 4600067325 & 4600067434 Duration: 01 Feb 2020 - 31 Jan 2024				
SAP No	Item	Short Description	Eskom Drawing No:	Tuning unit 1	Tuning unit 2	Tuning unit 3	Tuning unit 4
4483	U4	132kV line trap 2500A 40kA 0.5mH	0.54/9608	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558638	S3HH	275kV line trap 2500A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558636	S5HH	275kV line trap 2500A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558632	S8HH	275kV line trap 3150A 50kA 0.5mH 31mm/kV	0.54/9840	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558630	S9HH	275kV line trap 3150A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558628	S10HH	275kV line trap 4000A 50kA 0.5mH 31mm/kV	0.54/9841	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558835	Q1HH	400kV line trap 2500A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558833	Q3HH	400kV line trap 2500A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558831	Q6HH	400kV line trap 3150A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558826	Q7HH	400kV line trap 3150A 63kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558822	Q8HH	400kV line trap 3150A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558643	Q10HH	400kV line trap 4000A 63kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558626	QB1HH	765kV line trap 5000A 50kA 0.5 mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	

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Supplier / OEM	HVT SA / Trench	Neelan Tel: 011 316 7873 Mobile: 073 627 2936 email: neelan@hvt.co.za	Naidoo	Contract no: 4600066174 & 4600066175 Duration: 01 Sep 2019 - 31 Aug 2023			
SAP No	Item	Short Description	Eskom Drawing No:	Tuning unit 1	Tuning unit 2	Tuning unit 3	Tuning unit 4
667708	U2	132kV line trap 2500A 40kA 0.2mH	TBD	80 - 108kHz	104 - 156kHz	125 - 204kHz	194 - 500kHz
4483	U4	132kV line trap 2500A 40kA 0.5mH	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558638	S3HH	275kV line trap 2500A 50kA 0.5mH 31mm/kV	0.54/7791	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558632	S8HH	275kV line trap 3150A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558630	S9HH	275kV line trap 3150A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558628	S10HH	275kV line trap 4000A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558835	Q1HH	400kV line trap 2500A 50kA 0.5mH 31mm/kV	0.54/8078	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558833	Q3HH	400kV line trap 2500A 50kA 1.2mH 31mm/kV	0.54/8171	40 - 500kHz			
558831	Q6HH	400kV line trap 3150A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558826	Q7HH	400kV line trap 3150A 63kA 0.5mH 31mm/kV	0.54/8090	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558645	Q9HH	400kV line trap 3150A 63kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558643	Q10HH	400kV line trap 4000A 63kA 0.5mH 31mm/kV	0.54/8270	48 - 78kHz	70 - 156kHz	101 - 500kHz	

Supplier / OEM	Mega HVT / Artech	Phinias Tel: 011 314 8436 Mobile: 082 777 9521 email: phinias.kgori@za-megahvt.com	Kgori	Contract no: 4600066985 Duration: 01 Feb 2020 - 31 Jan 2024			
SAP No	Item	Short Description	Eskom Drawing No:	Tuning unit 1	Tuning unit 2	Tuning unit 3	Tuning unit 4
667708	U2	132kV line trap 2500A 40kA 0.2mH	TBD	80 - 108kHz	104 - 156kHz	125 - 204kHz	194 - 500kHz
4483	U4	132kV line trap 2500A 40kA 0.5mH	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558642	S1HH	275kV line trap 2500A 50kA 0.2mH 31mm/kV	TBD	80 - 108kHz	104 - 156kHz	125 - 204kHz	194 - 500kHz
558638	S3HH	275kV line trap 2500A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558636	S5HH	275kV line trap 2500A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558632	S8HH	275kV line trap 3150A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558630	S9HH	275kV line trap 3150A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			

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558628	S10HH	275kV line trap 4000A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558835	Q1HH	400kV line trap 2500A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558833	Q3HH	400kV line trap 2500A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558831	Q6HH	400kV line trap 3150A 50kA 0.5mH 31mm/kV	TBD	48 - 78kHz	70 - 156kHz	101 - 500kHz	
558822	Q8HH	400kV line trap 3150A 50kA 1.2mH 31mm/kV	TBD	40 - 500kHz			
558645	Q9HH	400kV line trap 3150A 63kA 1.2mH 31mm/kV	TBD	40 - 500kHz			

## 2.7 Outdoor circuit-breakers

Refer to Annex A for the list of the pre-approved outdoor Circuit-breakers (CB's).

## 2.8 Outdoor disconnectors (isolators and pantographs) and earthing switches

Refer to Annex B for the list of the pre-approved outdoor Disconnectors (Isolators and Pantographs) and Earthing switches (ES).

## 2.9 Power Transformers and Reactors

Refer to Annex C for the list of the pre-approved Power Transformers (Trfr's) and Reactors (Rx).

## 2.10 Capacitor banks

To be added upon pre-approval confirmed.

## 2.11 Power Electronics - FACTS/SVC/HVDC

To be added upon pre-approval confirmed.

## 2.12 Power Cables

To be added upon pre-approval confirmed.

## 2.13 Gas Insulated Switchgear

To be added upon pre-approval confirmed.

## 3. Authorization

This document has been seen by:

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Name and surname	Designation
Bheki Ntshangase	Senior Manager Substation Equipment & Diagnostics

#### **4. Revisions**

Date	Rev.	Compiler	Remarks
Sept 2023	1	S Nkosi	First communicated version of the Eskom Transmission list of pre-approved HV equipment
Aug 2023	1	S Nkosi	Draft version

#### **5. Development team**

The following people were involved in the development of this document:

- Bheki Ntshangase
- Sphiwe Nkosi
- Jabulani Cebekhulu
- Kevin Kleinhans
- Sibongile Maphosa
- Sidwell Mtetwa

#### **6. Acknowledgements**

The Compiler acknowledges the inputs, contributions and comments made by the Colleagues at Substation Equipment & Diagnostics.

## Annex A – List of pre-approved HV equipment – Circuit-breakers

Below is the typical list of pre-approved HV equipment, Circuit-breakers.

**Table A.1: List of the pre-approved HV equipment – Circuit-breakers (current ENC's up to 30 June 2024)**

#Item	Contract #	Commodity	Equipment type/model	Supplier Name	OEM factory (City, Country)	Supplier's Contract Manager	Supplier's Contact Detail	Supplier's Address
1	4600067755 / 4600070839	<a href="#">11, 22 &amp; 33kV Circuit Breakers</a>	<a href="#">OVB-VBF 40.5 (vacuum)</a>	ABB SA	ABB, Nashik	Avi Ramdhin	Tel: (0) 10 202 5722	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
					India			
							Mobile: (60) 522 5709	
							<a href="mailto:Avi.Ramdhin@za.abb.com">email: Avi.Ramdhin@za.abb.com</a>	
2	4600067756 / 4600070848	<a href="#">66kV Circuit Breakers</a>	<a href="#">70-SFM-32B</a>	HVT	Crompton Greaves,	Neelan Naidoo	Tel: (0) 10 316 7873	High Voltage Technologies (Pty) Ltd, 30 Boksteen, Clayville, Olifansfontein 1666
					Nashik,			
					India		Mobile: (0) 73 637 2936	
							<a href="mailto:neelan@hvt.co.za">email: neelan@hvt.co.za</a>	
3	4600067757 / 4600070945	<a href="#">132kV Circuit Breakers</a>	<a href="#">3AP1FG, 3APF1-FE</a>	Siemens	Siemens,	Willem Engelbrecht	Mobile: (0) 82 732 1515	Siemens (Pty) Ltd, 300 Janael Avenue, Halfway House 1685
					Aurangabad			

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	/ 4600072021				India		<a href="mailto:willem.engelbrecht@siemens-energy.com">email: willem.engelbrecht@siemens-energy.com</a>	
4	4600067761 / 460007023	<a href="#">275kV &amp; 400kV Circuit Breakers</a>	<a href="#">3AP2F1 (300kV), 3AP2F1(420kV)</a>	Siemens	Siemens,	Willem Engelbrecht	Mobile: (0) 82 732 1515	Siemens (Pty) Ltd, 300 Janael Avenue, Halfway House 1685
					Aurangabad			
					India		<a href="mailto:willem.engelbrecht@siemens-energy.com">email: willem.engelbrecht@siemens-energy.com</a>	
5	4600067766	<a href="#">550kV &amp; 765kV Circuit Breakers</a>	<a href="#">GL317(X), GL318(D)(X)</a>	ACTOM HVE	GE Grids,	Thando Nkosi	Tel: (0) 11 820 5358	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
					Chennai,			
					India		Mobile: (0) 64 890 9775	
							<a href="mailto:thando.nkosi@actom.co.za">email: thando.nkosi@actom.co.za</a>	

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Table A.2: Eskom Transmission circuit-breakers approved drawings as per current ENC

Contract:	Commodity:	Supplier Name & Equipment model	Eskom Contract Manager:	Eskom Buyer:	Valid	Supplier Contract Manager & OEM details:
4600067755/ 4600070839	33kV Circuit Breakers	ABB SA, [OVB-VBF 40.5 (vacuum)]	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Avi Ramdhin (Avi.Ramdhin@za.abb.com) Tel: (0) 10 202 5722  Mobile: (60) 522 5709, ABB SOUTH AFRICA (PTY) LTD 2 LAKE ROAD, LONGMEADOW, MODDERFONTEIN 1609 OEM: ABB, Nashik India
SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.
0642986	3	33kV 2500A 31.5kA 3P 31mm/kV 110VDC	GA	0.54/9854 Rev.0		2REA058138A0004
(This rating is also applicable to - 0678039)			Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9860 Rev.0		1VYN301250-010/ YN1V301201-N

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			Nameplate	0.54/9858 Rev.0		YN1V300303-828 Rev.A
			Wiring	0.54/9855 Rev.0		YN1V300013-HYB
0642987	4	33kV 2500A 31.5kA 3P 31mm/kV 220VDC	GA	0.54/9854 Rev.0		2REA058138A0004
(This rating is also applicable to - 0678040)			Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9860 Rev.0		1VYN301250-010/ YN1V301201-N
			Nameplate	0.54/9858 Rev.0		YN1V300303-828 Rev.A
			Wiring	0.54/9855 Rev.0		YN1V300013-HYB
<b>Contract:</b>	<b>Commodity:</b>	<b>Supplier Name &amp; Equipment model:</b>	<b>Eskom Contract Manager:</b>	<b>Eskom Buyer:</b>	<b>Valid</b>	<b>Supplier Contract Manager &amp; OEM details:</b>
4600067756/ 4600070848	66kV Circuit Breakers	HVT, [70-SFM-32B]	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Neelan Naidoo, Tel: (0) 10 316 7873 Mobile: (0) 73 637 2936 email: neelan@hvt.co.za, High Voltage Technologies (Pty) Ltd, 30 Boksteen, Clayville, Olifansfontein 1666 OEM: Crompton Greaves, Nashik, India

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SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.
0642984	1	66kV 2500A 31.5kA 3P 31mm/kV 110VDC	GA	0.54/9657 Rev 0		SX1-GA-01
			Support	0.54/9749 Rev 0		SX1-SS-08
			Insulators	0.54/9751 Rev 0; 0.54/9752 Rev 0		SX10-SUP-06; SX1-INT-06
			Nameplate	0.54/9661 Rev 0		SX1-RP-04A-01; SX1-RP-04A-02
			Wiring	0.54/9662 Rev 0		SX1-WIR-10
0642985	2	66kV 2500A 31.5kA 3P 31mm/kV 220VDC	GA	0.54/9657 Rev 0		SX1-GA-01
			Support	0.54/9749 Rev 0		SX1-SS-08
			Insulators	0.54/9751 Rev 0; 0.54/9752 Rev 0		SX10-SUP-06; SX1-INT-06
			Nameplate	0.54/10206 Rev 0		SX1-RP-04B-01; SX1-RP-04B-02

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			Wiring	0.54/9662 Rev 0		SX1-WIR-10
0642980	3	66kV 3150A 31.5kA 3P 31mm/kV 110VDC	GA	0.54/9657 Rev 0		SX1-GA-01
			Support	0.54/9749 Rev 0		SX1-SS-08
			Insulators	0.54/9751 Rev0; 0.54/9752 Rev0		SX10-SUP-06; SX1-INT-06
			Nameplate	0.54/9661 Rev0		SX1-RP-04A-01; SX1-RP-04A-02
			Wiring	0.54/9662 Rev0		SX1-WIR-10
0642981	4	66kV 3150A 31.5kA 3P 31mm/kV 220VDC	GA	0.54/9657 Rev0		SX1-GA-01
			Support	0.54/9749 Rev0		SX1-SS-08
			Insulators	0.54/9751 Rev0; 0.54/9752 Rev0		SX10-SUP-06; SX1-INT-06
			Nameplate	0.54/10206 Rev0		SX1-RP-04B-01; SX1-RP-04B-02
			Wiring	0.54/9662 Rev0		SX1-WIR-10

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Contract:	Commodity:	Supplier Name & Equipment model:	Eskom Contract Manager:	Eskom Buyer:	Valid	Supplier Contract Manager & OEM details:
4600067757/ 4600070945/ 4600072021	132kV Circuit Breakers	Siemens, [3AP1FG, 3APF1-FE]	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Nadia Mahomed nadia.mahomed@siemens- energy.com Mobile: +27 (83) 634 9413, Siemens Park 300 Janadel Avenue 1685 Midrand, South Africa OEM: Siemens Ltd, AURANGABAD
SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.
0642974; 0678041	2	132kV 3150A 40kA 1P 31mm/kV 110VDC without or with Controlled Switching Device	GA	0.54/9880 Sh 2		(3) G 7 1 A H S - K A 4 0 1 - Z 1 5 2
		Type: 3AP1FI (145kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9885		(3) G 7 1 A H S - K A 4 0 1 - C 1 5 2
			Nameplate	0.54/9881		(3) G 7 1 A H S - K A 4 0 1 - N 1 5 2

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			Wiring	0.54/9883		(3) G 7 1 A H S - K A 4 0 1 - W 1 5 2
			Equipment List	0.54/9884		(3)G71AHS-KA401-E152
			Mechanism Box Layout	0.54/9882		(3) G71AHS-KA401-L152
			Design Instructions	0.54/9879		(3) G71AHS-KA401-D0152-
0642975; 0678042	4	132kV 3150A 40kA 1P 31mm/kV 220VDC without or with Controlled Switching Device	GA	0.54/10130 Sh 2		( 3 ) G 7 1 A H S - K A 4 0 1 - Z 1 5 6
		Type: 3AP1FI (145kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/10135		( 3 ) G 7 1 A H S - K A 4 0 1 - C 1 5 6
			Nameplate	0.54/10131		( 3 ) G 7 1 A H S - K A 4 0 1 - N 1 5 6
			Wiring	0.54/10133		( 3 ) G 7 1 A H S - K A 4 0 1 - W 1 5 6
			Equipment List	0.54/10134		(3)G71AHS-KA401-E156
			Mechanism Box Layout	0.54/10132		(3) G71AHS-KA401-L156
			Design Instructions	0.54/10129		(3) G71AHS-KA401-D0156-

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0642972	5	132kV 3150A 40kA 3P 31mm/kV 110VDC	GA	0.54/9867 Sh 1		(3) G 7 1 A H S - K A 4 0 1 - Z 2 4 5 7
		3AP1FG(145kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9872		(3) G 7 1 A H S - K A 4 0 1 - C 2 4 5 7
			Nameplate	0.54/9868		(3) G 7 1 A H S - K A 4 0 1 - N 2 4 5 7
			Wiring	0.54/9870		(3) G 7 1 A H S - K A 4 0 1 - W 2 4 5 7
			Equipment List	0.54/9871		(3)G71AHS-KA401-E2457
			Mechanism Box Layout	0.54/9869		(3) G71AHS-KA401-L2457
			Design Instructions	0.54/9873		(3) G71AHS-KA401-D2457-
0642973	6	132kV 3150A 40kA 3P 31mm/kV 220VDC	GA	0.54/10122 Sh 1		(3) G 7 1 A H S - K A 4 0 1 - Z 2 4 7 0
		3AP1FG(145kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/10127		(3) G 7 1 A H S - K A 4 0 1 - C 2 4 7 0

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			Nameplate	0.54/10123		(3) G 7 1 A H S - K A 4 0 1 - N 2 4 7 0
			Wiring	0.54/10125		(3) G 7 1 A H S - K A 4 0 1 - W 2 4 7 0
			Equipment List	0.54/10126		(3)G71AHS-KA401-E2470
			Mechanism Box Layout	0.54/10124		(3) G71AHS-KA401-L2470
			Design Instructions	0.54/10121		(3) G71AHS-KA401-D2470-
Contract:	Commodity:	Supplier Name & Equipment model:	Eskom Contract Manager:	Eskom Buyer:	Valid	Supplier Contract Manager & OEM details:
4600065565/4600067761/ 460007023	275kV & 400kV Circuit Breakers	3AP2F1 (300kV), 3AP2F1(420kV)	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Nadia Mahomed nadia.mahomed@siemens- energy.com Mobile: +27 (83) 634 9413, Siemens Park 300 Janadel Avenue 1685 Midrand, South Africa OEM: Siemens Ltd, AURANGABAD
SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.

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0678188; 0678170	1	300kV 3150A 50kA 1P 31mm/kV 110VDC with / without Controlled Switching Device	GA	0.54/9892 Rev 1		(3) G71AHS-KA404-Z0501-A
		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9897 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - C 0 5 0 1
			Nameplate	0.54/9893 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 5 0 1
			Wiring	0.54/9895 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - W 0 5 0 1
			Marshaling Box, Control Panel, Cable Layout	0.54/9894 Rev 1		(3) G71AHS-KA404-L0501-
			Equipment List	0.54/9896 Rev 1		(3)G71AHS-KA404-E501
			Design Instructions	0.54/9891 Rev 1		(3) G71AHS-KA404-D501-
0678190; 0678173	2	300kV 3150A 50kA 1P 31mm/kV 220VDC with / without Controlled Switching Device	GA	0.54/9892 Rev 1		(3)G71AHS-KA404-Z0520-A

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		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9897 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - C 0 5 2 0
			Nameplate	0.54/9893 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 5 2 0
			Wiring	0.54/9895 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - W 0 5 2 0
			Marshaling Box, Control Panel, Cable Layout	0.54/9894 Rev 1		(3) G71AHS-KA404-L0520-A
			Equipment List	0.54/9896 Rev 1		(3)G71AHS-KA404-E520
			Design Instructions	0.54/9891 Rev 1		(3) G71AHS-KA404-D520-
0660057; 0678195	3	420kV 4000A 63kA 1P 31mm/kV 110VDC with/without Controlled Switching Device	GA	0.54/9918 Rev 1		(3)G7A H S - K A 4 0 4 - Z 0 4 9 5-A
		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9923 Rev 1		G 7 1 A H S - K A 4 0 4 - C 0 4 9 5

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			Nameplate	0.54/9919 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 4 9 5-
			Wiring	0.54/9921 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - W 0 4 9 5
			Marshaling Box, Control Panel, Cable Layout	0.54/9920 Rev 1		(3) G71AHS-KA404-L0495-A
			Equipment List	0.54/9922 Rev 1		(3)G71AHS-KA404-E495
			Design Instructions	0.54/9917 Rev 1		(3) G71AHS-KA404-E496-
0660059; 0678196	4	420kV 4000A 63kA 1P 31mm/kV 220VDC with/without Controlled Switching Device	GA	0.54/9918 Rev 1		(3)G71AHS-KA404-Z0518-A
		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9923 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - C 0 5 1 8
			Nameplate	0.54/9919 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 5 1 8
			Wiring	0.54/9921 Rev 1		(3) G71AHS-KA404-W0518

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			Marshaling Box, Control Panel, Cable Layout	0.54/9920 Rev 1		(3) G71AHS-KA404-L0518-A
			Equipment List	0.54/9922 Rev 1		(3)G71AHS-KA404-E518
			Design Instructions	0.54/9917 Rev 1		(3) G71AHS-KA404-D518-
0660054; 0678192	5	420kV 4000A 50kA 1P 31mm/kV 110VDC with/without Controlled Switching Device	GA	0.54/9905 Rev 1		(3)G71AHS-KA404-Z0496-A
		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9910 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - C 0 4 9 6
			Nameplate	0.54/9906 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 4 9 6
			Wiring	0.54/9908 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - W 0 4 9 6-
			Marshaling Box, Control Panel, Cable Layout	0.54/9907 Rev 1		(3) G71AHS-KA404-L0496-A
			Equipment List	0.54/9909 Rev 1		(3)G71AHS-KA404-E496

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			Design Instructions	0.54/9904 Rev 1		(3) G71AHS-KA404-E496-
0660055; 0678194	6	420kV 4000A 50kA 1P 31mm/kV 220VDC with/without Controlled Switching Device	GA	0.54/9905 Rev 1		(3)G71AHS-KA404-Z0519-A
		3AP2FI (420kV)	Support	0.54/302	0.54/306	N/A (Eskom scope of supply)
			Insulators	0.54/9910 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - C 0 5 1 9
			Nameplate	0.54/9906 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - N 0 5 1 9
			Wiring	0.54/9908 Rev 1		(3) G 7 1 A H S - K A 4 0 4 - W 0 5 1 9-
			Marshaling Box, Control Panel, Cable Layout	0.54/9907 Rev 1		(3) G71AHS-KA404-L0519-A
			Equipment List	0.54/9909 Rev 1		(3)G71AHS-KA404-E519
			Design Instructions	0.54/9904 Rev 1		(3) G71AHS-KA404-D519-

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Contract:	Commodity:	Supplier Name & Equipment model:	Eskom Contract Manager:	Eskom Buyer:	Valid	Supplier Contract Manager & OEM details:
4600067369	550kV & 765kV Circuit Breakers	GL317(X) - circuit-breakers with Grading Capacitors	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Thando Nkosi Tel: (+27) 011-820-5358, Mobile: (+27) 064-890-9775, Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413 OEM: GE Grids, Chennai, India
SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.
0666396	1	550kV 4000A 63kA 1P 31mm/kV 220VDC with/without Controlled Switching Device	GA	0.54/9766 Rev 0		327100XXXXGA317X02 Rev 3
		GL317X (550kV)	Support structure	0.54/10162 Rev 0; 0.54/9771 Rev 0		SA340539 Rev 3; 327100XXXXNP317X02 Rev 2
			Grading Capacitor	0.54/9757 Rev 0		327100XXXXGC317X02 Rev 1

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			Interrupter Insulator	0.54/9773 Rev 0		327100XXXXCI317X02 Rev 1
			Support Insulator	0.54/9772 Rev 0		327100XXXXSI317X02 Rev 1
			Cross Sectional view of Insulator	0.54/10161 Rev 0		327100XXXXCSC317X02 Rev 0
			Foundation Plan	0.54/9767 Rev 0		327100XXXXFP317X02 Rev 3
			Nameplate	0.54/9769 Rev 0		327100XXXXNP317X02 Rev 1
			Wiring	0.54/7529 Rev 0		327100XXXXED317X02 Rev 0
			Mechanism Cubicle	0.54/9768 Rev 0		327100XXXXMCE317X02 Rev 1
			Equipment Layout of Mechanism cubicle	0.54/9770 Rev 0		327100XXXXMCI317X02 Rev 2
Contract:	Commodity:	Supplier Name & Equipment model:	Eskom Contract Manager:	Eskom Buyer:	Valid	Supplier Contract Manager & OEM details:

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4600067369	765kV Circuit Breakers	GL318(X) - with Grading Capacitors; GL318(D)(X) - with Pre-insertion Resistors (PiR) & Grading Capacitors	Takalani Tshavhungwe (TshavhT@eskom.co.za)	Mabatane Mariri (MaririMA@eskom.co.za)	2020.07.01 - 2024.06.30	Thando Nkosi Tel: (+27) 011-820-5358, Mobile: (+27) 064-890-9775, Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413 OEM: GE Grids, Chennai, India
SAP No.	Item No.	Short text description	Type of drawing	Eskom Drawings No.	Eskom Drawings No.	OEM Drawings No.

Table A.3: List of the pre-approved HV equipment – Circuit-breakers (from recent expired ENC's)

Contract #	Voltage (kV)	Equipment type/model	Supplier	OEM factory (City, Country)	Supplier's Contract Manager	Supplier's Contract Manager	Supplier's Contact Detail
4600031076	11,22,33 kV Circuit Breakers	30-SFGP 40A	High Voltage Technology (Pty) Ltd	Crompton Greaves - Nashik, India	Neelan Naidoo	Tel: (0) 10 316 7873, Mobile: (0) 73 637 2936, email: neelan@hvt.co.za	High Voltage Technologies (Pty) Ltd, 30 Boksteen, Clayville, Olifansfontein 1666
4600065567	66 kV Circuit Breakers	70-SFM-32 B	High Voltage Technology (Pty) Ltd	Crompton Greaves - Nashik, India	Neelan Naidoo	Tel: (0) 10 316 7873, Mobile: (0) 73 637 2936, email: neelan@hvt.co.za	High Voltage Technologies (Pty) Ltd, 30 Boksteen, Clayville, Olifansfontein 1666

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4600030926	66kV Circuit Breakers	EDF SK1-1	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden; Vadodara, India	Avi Ramdhin	Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4600048464	66 & 132kV Circuit Breakers	EDF SK1-1; LTB 145; LTB 170	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden; Vadodara, India		ABB South Africa	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4650010144	132kV Circuit Breakers	LTB145	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden; Vadodara, India		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4670001216	132kV Circuit Breakers	LTB170	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4600065557	132 kV Circuit Breakers	3AP1FG, 3APF1-FE	Siemens Energy (Pty) Ltd	Siemens - Aurangabad, India	Willem Engelbrecht	Mobile: (0) 82 732 1515, email: willem.engelbrecht@siemens-energy.com	Siemens (Pty) Ltd, 300 Janael Avenue, Halfway House 1685
4600058128	275kV Circuit Breakers	HPL300	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609

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4600065566	275kV Circuit Breakers	HPL300	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4650013005	275kV (50kA) Circuit Breakers	HPL300	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4670002087	275kV (50kA) Circuit Breakers	LTB300E	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Tel: (0) 10 202 5722, Mobile: (60) 522 5709, email: Avi.Ramdhin@za.abb.com	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4650013007	275kV Circuit Breakers	GL315 (50kA)	ACTOM High Voltage Equipment	AREVA, Villeurbanne, France; Chennai, India	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
N/A	275kV Circuit Breakers	GL314X (50 kA)	ACTOM High Voltage Equipment	GE Grids; Chennai, India			Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4600065565	400 kV (50kA) Circuit Breakers	3AP2F1	Siemens Energy (Pty) Ltd	Siemens - Aurangabad, India	Willem Engelbrecht	Mobile: (0) 82 732 1515, email: willem.engelbrecht@siemens- energy.com	Siemens (Pty) Ltd, 300 Janael Avenue, Halfway House 1685
4670002089	275 kV Circuit Breakers	GL315 (50kA)	ACTOM High Voltage Equipment	AREVA/GE - Villeurbanne, France;	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413

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				Chennai, India			
N/A	400 kV (63kA) Circuit Breakers	HPL420B2	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Hitachi Energy, South Africa	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
N/A	400 kV (50kA) Circuit Breakers	LTB420E2	ABB South Africa (Pty) Ltd	ABB - Ludvika, Sweden		Hitachi Energy, South Africa	ABB South Africa (Pty) Ltd, 2 Lake Road, Longmeadow, Modderfontein 1609
4600058059	400 kV Circuit Breakers	GL316 (50kA), GL316X (63kA)	ACTOM High Voltage Equipment	AREVA/ GE - Villeurbanne, France; Chennai, India	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4600065564	400 kV (63kA) Circuit Breakers	GL316X (63kA)	ACTOM High Voltage Equipment	AREVA/ GE - Villeurbanne, France; Chennai, India	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
N/A	765 kV Circuit- breakers	GL318(D)(X)	ACTOM High Voltage Equipment	AREVA/ GE - Villeurbanne, France; Chennai, India			Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413

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**Annex B – List of pre-approved HV equipment – Disconnectors and Earthing Switches**

Below is the typical list of pre-approved HV equipment, Disconnectors (Isolators and Pantographs) and Earthing switches (ES).

**Table B.1: List of the pre-approved HV equipment – Disconnectors and Earthing switches (current ENC's up to 30 June 2024)**

#Item	Contract #	Commodity	Equipment type/model	Supplier Name	OEM factory (City, Country)	Supplier's Contract Manager	Supplier's Contact Detail	Supplier's Address
<b>1</b>	4600067765/ 4600070917	<a href="#">22kV to 132kV Disconnectors/ Isolators</a>	<a href="#">DSB24, DSB36, DSB72, DSB120, GE SX-145</a>	ACTOM HVE	ACTOM HVE,	Thando Nkosi	Tel: (0) 11 820 5358	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
					South Africa		Mobile: (0) 64 890 9775	
							<a href="mailto:thando.nkosi@actom.co.za">email: thando.nkosi@actom.co.za</a>	
<b>2</b>	4600067760	<a href="#">275kV &amp; 400kV Disconnectors/ Isolators</a>	<a href="#">SSBIII-300, SSBIII-420, GSSB-300, GSSB-420</a>	Mega HVT	HAPAM,	Phinias Kgori	Tel: (0) 11 314 8436	Mega High Voltage Technologies (Pty) Ltd, 397 Crescent, 2 Summit Square, Unit 4, Corporate Part North Midrand
					Amersfoort, Netherlands		Mobile: (0) 84 777 9521	
							<a href="mailto:Phinias.Kgori@za-megahvt.com">email: Phinias.Kgori@za-megahvt.com</a>	
<b>3</b>	4600067758	<a href="#">765kV Disconnectors/ Isolators</a>	<a href="#">SPOL(T), STB</a>	ACTOM HVE	GE Grids,	Thando Nkosi	Tel: (0) 11 820 5358	Actom High Voltage Equipment, 2 Magnet Road,
					Noventa di Piave,			

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					Italy		Mobile: (0) 64 890 9775	Knights, Germiston 1413
							<a href="mailto:thando.nkosi@actom.co.za">email: thando.nkosi@actom.co.za</a>	
4	4600067827	<a href="#">220kV &amp; 550kV Disconnectors/ Isolators</a>	<a href="#">SHANDONG GW7F-252(D)(W), GW6A-252(D)(W), GW7F-550(D)(W)</a>	Adeptacc Consultants	Shandong Taikai, Taian City, China	Kari Wu	Mobile: (0) 83 377 9979	Adeptacc Consultants, Unit 4 Lepus Road, Crown Mines Extension 2092, Johannesburg, South Africa, 2092
							<a href="mailto:wijkari@hotmail.com">email: wijkari@hotmail.com</a>	

Table B.2: Eskom Transmission 22kV to 132 kV disconnectors and earthing switches approved drawings as per current ENC (ACTOM HVE)

Item	SAP Material No	Short Description (Material)	OEM Designation/ Type	DS-CRDB/ ES/DS-Panto	Phase spacing (mm)	Side of ES/ ES Number	Outline / GA			
							ACTOM/ GE Drwg number	OEM Rev	Eskom allocated 0.54 number	Eskom Rev
1	0642548	22kV 1600A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110V DC	DSB24/1600	DS-CRDB	1000	0-ES	DB0221631H10	0	0.54/9949	0

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5	0642561	22kV 1600A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220V DC	DSB24/1600	DS-CRDB	1000	0-ES	DB0221631H10	0	0.54/9949	0
17	0642549	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540H10	0	0.54/9941	0
18	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540HR10	0	0.54/9942	0
19	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540HL10	0	0.54/9943	0
20	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540HD10	0	0.54/9944	0
21	0642562	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540H10	0	0.54/9941	0
22	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540HR10	0	0.54/9942	0
23	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540HL10	0	0.54/9943	0

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24	No SAP number	22kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540HD10	0	0.54/9944	0
25	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540M10	0	0.54/9945	0
26	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540MR10	0	0.54/9946	0
27	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540ML10	0	0.54/9947	0
28	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540MD10	0	0.54/9948	0
29	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540M10	0	0.54/9945	0
30	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540MR10	0	0.54/9946	0
31	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540ML10	0	0.54/9947	0

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32	No SAP number	22kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Swicth 220VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540MD10	0	0.54/9948	0
33	0642550	22kV2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540H10	0	0.54/9941	0
34	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540HR10	0	0.54/9942	0
35	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Swicth 110VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540HL10	0	0.54/9943	0
36	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Double Earthing Swicth 110VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540HD10	0	0.54/9944	0
37	0642563	22kV2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540H10	0	0.54/9941	0
38	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540HR10	0	0.54/9942	0
39	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Swicth 220VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540HL10	0	0.54/9943	0

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40	No SAP number	22kV 2500A 31.5kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540HD10	0	0.54/9944	0
41	No SAP number	22kV2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540M10	0	0.54/9945	0
42	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540MR10	0	0.54/9946	0
43	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540ML10	0	0.54/9947	0
44	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540MD10	0	0.54/9948	0
45	No SAP number	22kV2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	DSB24/2500	DS-CRDB	1000	0-ES	DB0222540M10	0	0.54/9945	0
46	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB24/2500+RE	DS-CRDB	1000	1-RH	DB0222540MR10	0	0.54/9946	0
47	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB24/2500+LE	DS-CRDB	1000	1-LH	DB0222540ML10	0	0.54/9947	0

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48	No SAP number	22kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	DSB24/2500+DE	DS-CRDB	1000	2-ES	DB0222540MD10	0	0.54/9948	0
49	0642551	33kV 1600A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB36/1600	DS-CRDB	1200	0-ES	DB0331631H12	0	0.54/9965	0
53	0642564	33kV 1600A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB36/1600	DS-CRDB	1200	0-ES	DB0331631H12	0	0.54/9965	0
65	0642552	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531H12	0	0.54/9957	0
66	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531HR12	0	0.54/9958	0
67	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531HL12	0	0.54/9959	0
68	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switches 110VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531HD12	0	0.54/9960	0
69	0642565	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531H12	0	0.54/9957	0
70	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531HR12	0	0.54/9958	0

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71	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531HL12	0	0.54/9959	0
72	No SAP number	33kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switches 220VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531HD12	0	0.54/9960	0
73	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531M12	0	0.54/9961	0
74	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531MR12	0	0.54/9962	0
75	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531ML12	0	0.54/9963	0
76	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531MD12	0	0.54/9964	0
77	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220vDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531M12	0	0.54/9961	0
78	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531MR12	0	0.54/9962	0
79	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531ML12	0	0.54/9963	0

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80	No SAP number	33kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531MD12	0	0.54/9964	0
81	0642553	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531H12	0	0.54/9957	0
82	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531HR12	0	0.54/9958	0
83	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531HL12	0	0.54/9959	0
84	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531HD12	0	0.54/9960	0
85	0642566	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531H12	0	0.54/9957	0
86	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531HR12	0	0.54/9958	0
87	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531HL12	0	0.54/9959	0
88	No SAP number	33kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531HD12	0	0.54/9960	0

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89	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531M12	0	0.54/9961	0
90	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531MR12	0	0.54/9962	0
91	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531ML12	0	0.54/9963	0
92	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531MD12	0	0.54/9964	0
93	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	CRD36/2500	DS-CRDB	1200	0-ES	CR0332531M12	0	0.54/9961	0
94	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	CRD36/2500+RE	DS-CRDB	1200	1-RH	CR0332531MR12	0	0.54/9962	0
95	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	CRD36/2500+LE	DS-CRDB	1200	1-LH	CR0332531ML12	0	0.54/9963	0
96	No SAP number	33kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	CRD36/2500+DE	DS-CRDB	1200	2-ES	CR0332531MD12	0	0.54/9964	0

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97	0647894	33kV 31.5 kA 31mm/kV Hand Operated Earthing Switch (Separately Mounted) 110VDC	AEB 33/40	ES	1200		SMES03331H12		0.54/10003	0
98	0647893	33kV 31.5 kA 31mm/kV Hand Operated Earthing Switch (Separately Mounted) 220VDC	AEB 33/40	ES	1200		SMES03331H12		0.54/10003	0
99	0642554	66kV 1600A 20kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB72/1600	DS-CRDB	2000	0-ES	DB0661640H20	0	0.54/10017	0
103	0642567	66kV 1600A 20kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB72/1600	DS-CRDB	2000	0-ES	DB0661640H20	0	0.54/10017	0
131	0642555	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540H20	0	0.54/10009	0
132	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540HR20	0	0.54/10010	0
133	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540HL20	0	0.54/10011	0
134	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540HD20	0	0.54/10012	0

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135	0642568	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540H20	0	0.54/10009	0
136	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540HR20	0	0.54/10010	0
137	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540HL20	0	0.54/10011	0
138	No SAP number	66kV 2500A 25kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540HD20	0	0.54/10012	0
139	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540M20	0	0.54/10013	0
140	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540MR20	0	0.54/10014	0
141	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540ML20	0	0.54/10015	0
142	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540MD20	0	0.54/10016	0

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143	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540M20	0	0.54/10013	0
144	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540MR20	0	0.54/10014	0
145	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540ML20	0	0.54/10015	0
146	No SAP number	66kV 2500A 25kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540MD20	0	0.54/10016	0
147	0642556	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540H20	0	0.54/10009	0
148	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540HR20	0	0.54/10010	0
148	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540HL20	0	0.54/10011	0
150	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540HD20	0	0.54/10012	0

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151	0642569	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540H20	0	0.54/10009	0
152	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540HR20	0	0.54/10010	0
153	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540HL20	0	0.54/10011	0
154	No SAP number	66kV 2500A 31,5kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540HD20	0	0.54/10012	0
155	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540M20	0	0.54/10013	0
156	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540MR20	0	0.54/10014	0
157	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540ML20	0	0.54/10015	0
158	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540MD20	0	0.54/10016	0

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159	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	DSB72/2500	DS-CRDB	2000	0-ES	DB0662540M20	0	0.54/10013	0
160	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	DSB72/2500+RE	DS-CRDB	2000	1-RH	DB0662540MR20	0	0.54/10014	0
161	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	DSB72/2500+LE	DS-CRDB	2000	1-LH	DB0662540ML20	0	0.54/10015	0
162	No SAP number	66kV 2500A 31,5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	DSB72/2500+DE	DS-CRDB	2000	2-ES	DB0662540MD20	0	0.54/10016	0
171	0644879	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC	S3C 72.5 kV	DS-CRDB	2000	0-ES	DIN-48968	B	0.54/10005	0
172	0647751	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC	S3C-T 72.5 kV	DS-CRDB	2000	1-RH	DIN-48969	B	0.54/10006	0
173	0647753	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC	S3C-T 72.5 kV	DS-CRDB	2000	1-LH	DIN-48972	B	0.54/10007	0
174	0647755	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC	S3C-2T 72.5 kV	DS-CRDB	2000	2-ES	DIN-48970	B	0.54/10008	0
175	0647757	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC	S3C 72.5 kV	DS-CRDB	2000	0-ES	DIN-48968	B	0.54/10005	0

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176	0647752	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC	S3C-T 72.5 kV	DS-CRDB	2000	1-RH	DIN-48969	B	0.54/10006	0
177	0647754	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC	S3C-T 72.5 kV	DS-CRDB	2000	1-LH	DIN-48972	B	0.54/10007	0
178	0647756	66kV 3150A 31.5kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC	S3C-2T 72.5 kV	DS-CRDB	2000	2-ES	DIN-48970	B	0.54/10008	0
195	0647889	66kV 31,5kA Hand Operated Earthing Switch (Separately Mounted) 110VDC	AEB 72/40	ES	1800		SMES06640H18		0.54/10004	0
196	0647890	66kV 31,5kA Hand Operated Earthing Switch (Separately Mounted) 220VDC	AEB 72/40	ES	1800		SMES06640H18		0.54/10004	0
213	0642559	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC 2400mm	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540H24	0	0.54/9876	0
214	0647760	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC 2400mm	DSB120/2500+RE	DS-CRDB	2400	1-RH	DB1322540HR24	0	0.54/9877	0
215	0647766	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC 2400mm	DSB120/2500+LE	DS-CRDB	2400	1-LH	DB1322540HL24	0	0.54/9888	0
216	0647770	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC 2400mm	DSB120/2500+DE	DS-CRDB	2400	2-ES	DB1322540HD24	0	0.54/9889	0

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217	0642572	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC 2400mm	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540H24	0	0.54/9876	0
218	0647761	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC 2400mm	DSB120/2500+RE	DS-CRDB	2400	1-RH	DB1322540HR24	0	0.54/9877	0
219	0647767	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC 2400mm	DSB120/2500+LE	DS-CRDB	2400	1-LH	DB1322540HL24	0	0.54/9888	0
220	0647771	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC 2400mm	DSB120/2500+DE	DS-CRDB	2400	2-ES	DB1322540HD24	0	0.54/9889	0
221	0647778	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC 2400mm	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540M24	0	0.54/9973	0
222	0647782	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC 2400mm	DSB120/2500+RE	DS-CRDB	2400	1-RH	DB1322540MR24	0	0.54/9974	0
223	0647741	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC 2400mm	DSB120/2500+LE	DS-CRDB	2400	1-LH	DB1322540ML24	0	0.54/9975	0
224	0647743	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC 2400mm	DSB120/2500+DE	DS-CRDB	2400	2-ES	DB1322540MD24	0	0.54/9976	0
225	0647779	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC 2400mm	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540M24	0	0.54/9973	0

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226	0647740	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC 2400mm	DSB120/2500+RE	DS-CRDB	2400	1-RH	DB1322540MR24	0	0.54/9974	0
227	0647742	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC 2400mm	DSB120/2500+LE	DS-CRDB	2400	1-LH	DB1322540ML24	0	0.54/9975	0
228	0647744	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC 2400mm	DSB120/2500+DE	DS-CRDB	2400	2-ES	DB1322540MD24	0	0.54/9976	0
229	0642560	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 110VDC 3000mm	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540H30	0	0.54/9977	0
230	0647762	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 110VDC 3000mm	DSB120/2500+RE	DS-CRDB	3000	1-RH	DB1322540HR30	0	0.54/9978	0
231	0647768	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 110VDC 3000mm	DSB120/2500+LE	DS-CRDB	3000	1-LH	DB1322540HL30	0	0.54/9979	0
232	0647772	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 110VDC 3000mm	DSB120/2500+DE	DS-CRDB	3000	2-ES	DB1322540HD30	0	0.54/9980	0
233	0642573	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Without Earthing Switch 220VDC 3000mm	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540H30	0	0.54/9977	0

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234	0647763	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Right Hand Earthing Switch 220VDC 3000mm	DSB120/2500+RE	DS-CRDB	3000	1-RH	DB1322540HR30	0	0.54/9978	0
235	0647769	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Left Hand Earthing Switch 220VDC 3000mm	DSB120/2500+LE	DS-CRDB	3000	1-LH	DB1322540HL30	0	0.54/9979	0
236	0647773	132kV 2500A 40kA 31mm/kV Hand Operated Disconnectors Double Earthing Switch 220VDC 3000mm	DSB120/2500+DE	DS-CRDB	3000	2-ES	DB1322540HD30	0	0.54/9980	0
237	0647780	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 110VDC 3000mm	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540M30	0	0.54/9981	0
238	0647745	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 110VDC 3000mm	DSB120/2500+RE	DS-CRDB	3000	1-RH	DB1322540MR30	0	0.54/9982	0
239	0647747	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 110VDC 3000mm	DSB120/2500+LE	DS-CRDB	3000	1-LH	DB1322540ML30	0	0.54/9983	0
240	0647749	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 110VDC 3000mm	DSB120/2500+DE	DS-CRDB	3000	2-ES	DB1322540MD30	0	0.54/9984	0
241	0647781	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Without Earthing Switch 220VDC 3000mm	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540M30	0	0.54/9981	0

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242	0647746	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Right Hand Earthing Switch 220VDC 3000mm	DSB120/2500+RE	DS-CRDB	3000	1-RH	DB1322540MR30	0	0.54/9982	0
243	0647748	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Left Hand Earthing Switch 220VDC 3000mm	DSB120/2500+LE	DS-CRDB	3000	1-LH	DB1322540ML30	0	0.54/9983	0
244	0647750	132kV 2500A 40kA 31mm/kV Motor Operated Disconnectors Double Earthing Switch 220VDC 3000mm	DSB120/2500+DE	DS-CRDB	3000	2-ES	DB1322540MD30	0	0.54/9984	0
261	0642689	132kV 2500A 40kA 31mm/kV Motor Operated Pantograph Disconnecter Without Earthing Switch 110VDC	SX 145 kV	DS-PANTO	1600	0-ES	DIN-43998		0.54/10001	
262	0642690	132kV 2500A 40kA 31mm/kV Motor Operated Pantograph Disconnecter Without Earthing Switch 220VDC	SX 145 kV	DS-PANTO	1600	0-ES	DIN-43998		0.54/10001	
263	0642691	132kV 2500A 40kA 31mm/kV Motor Operated Pantograph Disconnecter Single Earthing Switch 110VDC	SXT 145 kV	DS-PANTO	1600	1-ES	DIN-43999		0.54/10002	
264	0642692	132kV 2500A 40kA 31mm/kV Motor Operated Pantograph Disconnecter Single Earthing Switch 220VDC	SXT 145 kV	DS-PANTO	1600	1-ES	DIN-43999		0.54/10002	
265	0647887	132kV 40kA 31mm/kV Separately Mounted Earthing Switch 110VDC 2400mm	AEB 120/40	ES			SMES13240H24		0.54/9999	

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266	0647888	132kV 40kA 31mm/kV Separately Mounted Earthing Switch 220VDC 2400mm	AEB 120/40	ES			SMES13240H24		0.54/9999	
267	0647891	132kV 40kA 31mm/kV Separately Mounted Earthing Switch 110VDC 3000mm	AEB 120/40	ES			SMES13240H30		0.54/10000	
268	0647892	132kV 40kA 31mm/kV Separately Mounted Earthing Switch 220VDC 3000mm	AEB 120/40	ES			SMES13240H30		0.54/10000	
269	0666005	132kV 2500A 40kA Hand Operated Disconnectors Without ES (2-Phase, Conventional, C6, 2400mm, Pad) 110VDC	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540H24PH2	0	0.54/9993	0
270	0666006	132kV 2500A 40kA Hand Operated Disconnectors With 1 ES (2-Phase, Conventional, C6, 2400mm, Pad) 110VDC							0.54/9994	
271	0666013	132kV 2500A 40kA Hand Operated Disconnectors With 2 ES (2-Phase, Conventional, C6, 2400mm, Pad) 110VDC							0.54/9995	
272	0666014	132kV 2500A 40kA Hand Operated Disconnectors Without ES (2-Phase, Conventional, C6, 2400mm, Pad) 220VDC	DSB120/2500	DS-CRDB	2400	0-ES	DB1322540H24PH2	0	0.54/9993	0
273	0666015	132kV 2500A 40kA Hand Operated Disconnectors With 1 ES (2-Phase, Conventional, C6, 2400mm, Pad) 220VDC							0.54/9994	

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274	0666016	132kV 2500A 40kA Hand Operated Disconnectors With 2 ES (2-Phase, Conventional, C6, 2400mm, Pad) 220VDC							0.54/9995	
275	0666017	132kV 2500A 40kA Hand Operated Disconnectors Without ES (2-Phase, Conventional, C6, 3000mm, Pad) 110VDC	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540H30PH2	0	0.54/9996	0
276	0666018	132kV 2500A 40kA Hand Operated Disconnectors With 1 ES (2-Phase, Conventional, C6, 3000mm, Pad) 110VDC							0.54/9997	
277	0666019	132kV 2500A 40kA Hand Operated Disconnectors With 2 ES (2-Phase, Conventional, C6, 3000mm, Pad) 110VDC							0.54/9998	
278	0666021	132kV 2500A 40kA Hand Operated Disconnectors Without ES (2-Phase, Conventional, C6, 3000mm, Pad) 220VDC	DSB120/2500	DS-CRDB	3000	0-ES	DB1322540H30PH2	0	0.54/9996	0
279	0666022	132kV 2500A 40kA Hand Operated Disconnectors With 1 ES (2-Phase, Conventional, C6, 3000mm, Pad) 220VDC							0.54/9997	
280	0666023	132kV 2500A 40kA Hand Operated Disconnectors With 2 ES (2-Phase, Conventional, C6, 3000mm, Pad) 220VDC							0.54/9998	

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Table B.3: Eskom Transmission 275 kV to 400 kV disconnectors and earthing switches approved drawings as per current ENC (Mega-HVT – HAPAM)

Description		Type	SAP No.	Outline / GA	
				Hapam	Eskom
275kV, 1050 BIL					
1	275kV 3150A 50kA 110VDC Motor Operated Disconnector Without Earthing Switch 1050BIL 4300mm spacing	SSBIII-300	0664778	C414213-200-B	0.54/9876-Sht.1 (Rev.0)
2	275kV 3150A 50kA 110VDC Motor Operated Disconnector Right Hand Earthing Switch 1050BIL 4300mm spacing	SSBIII-R-300	0664783	C414213-202-B	0.54/9877-Sht.1 (Rev.0)
3	275kV 3150A 50kA 110VDC Motor Operated Disconnector Left Hand Earthing Switch 1050BIL, 4300mm spacing	SSBIII-L-300	0664785	C414213-204-B	0.54/9888-Sht.1 (Rev.0)
4	275kV 3150A 50kA 110VDC Motor Operated Disconnector Double Earthing Switch 1050BIL 4300mm spacing	SSBIII-2-300	0664787	C414213-206-B	0.54/9889-Sht.1 (Rev.0)
5	275kV 3150A 50kA 220VDC Motor Operated Disconnector Without Earthing Switch 1050BIL 4300mm spacing	SSBIII-300	0664782	C414213-210-B	0.54/9876-Sht.2 (Rev.0)
6	275kV 3150A 50kA 220VDC Motor Operated Disconnector Right Hand Earthing Switch 1050BIL, 4300mm spacing	SSBIII-R-300	0664784	C414213-212-D	0.54/9877-Sht.2 (Rev.0)
7	275kV 3150A 50kA 220VDC Motor Operated Disconnector Left Hand Earthing Switch 1050BIL, 4300mm spacing	SSBIII-L-300	0664786	C414213-214-D	0.54/9888-Sht.2 (Rev.0)
8	275kV 3150A 50kA 220VDC Motor Operated Disconnector Double Earthing Switch 1050BIL, 4300mm spacing	SSBIII-2-300	0664788	C414213-216-D	0.54/9889-Sht.2 (Rev.0)

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1	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1050BIL 5500mm spacing	SSBIII-300	0666181		
2	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1050BIL 5500mm spacing	SSBIII-R-300	0666182		
3	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1050BIL, 5500mm spacing	SSBIII-L-300	0666183		
4	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1050BIL 5500mm spacing	SSBIII-2-300	0666184		
5	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1050BIL 5500mm spacing	SSBIII-300	0666185		
6	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1050BIL, 5500mm spacing	SSBIII-R-300	0666186		
7	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1050BIL, 5500mm spacing	SSBIII-L-300	0662843		
8	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1050BIL, 5500mm spacing	SSBIII-2-300	0666187		
1	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1050BIL 6700mm spacing	SSBIII-300	0666188	C414213-240-A	0.54/10050 Sht.1
2	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1050BIL 6700mm spacing	SSBIII-R-300	0666189	C414213-242-A	0.54/10051 Sht.1
3	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1050BIL, 6700mm spacing	SSBIII-L-300	0678253	C414213-244-A	0.54/10052 Sht.1
4	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1050BIL 6700mm spacing	SSBIII-2-300	0666190	C414213-246-A	0.54/10053 Sht.1
5	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1050BIL 6700mm spacing	SSBIII-300	0666191	C414213-250-0	0.54/10050 Sht.2

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6	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1050BIL, 6700mm spacing	SSBIII-R-300	0666192	C414213-252-0	0.54/10051 Sht.2
7	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1050BIL, 6700mm spacing	SSBIII-L-300	0666193	C414213-254-A	0.54/10052 Sht.2
8	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1050BIL, 6700mm spacing	SSBIII-2-300	0666194	C414213-256-0	0.54/10053 Sht.2
1	275kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1050BIL	GSSB-300	0665023	C414213-270-0	0.54/9930-Sht.1 (Rev.0)
2	275kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1050BIL	GSSB-300	0665024	C414213-272-C	0.54/9930-Sht.2 (Rev.0)
3	275kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1050BIL	GSSB-AM-300	0665027	C414213-274-F	0.54/9931-Sht.1 (Rev.0)
4	275kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1050BIL	GSSB-AM-300	0665028	C414213-276-A	0.54/9931-Sht.2 (Rev.0)
1	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 4300mm spacing)	ABS-300	0665030	C414213-280	0.54/9932-Sht.1 (Rev.0)
2	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 4300mm spacing)	ABS-300	0665031	C414213-282-F	0.54/9932-Sht.2 (Rev.1)
5	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 5500mm spacing)	ABS-300	0665034	C414213-284	0.54/9933-Sht.1 (Rev.0)
6	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 5500mm spacing)	ABS-300	0665035	C414213-286	0.54/9933-Sht.2 (Rev.0)
9	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 6700mm spacing)	ABS-300	0665038	C414213-288	0.54/9934-Sht.1 (Rev.0)

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10	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1050BIL, 6700mm spacing)	ABS-300	0665039	C414213-290	0.54/9934-Sht.2 (Rev.0)
	Assembling drawing (275kV, 1050BIL)	SSBIII-2-300	N/A	A2-900466-B	0.54/9901 Sht.1 (Rev.0)
	Cross Beam for mounting of Drives (275kV, 1050BIL)		N/A	MHVT0003-101	0.54/9901 Sht.2 (Rev.0)
	Height of Cross Beam Calculations (275kV)		N/A	MHVT0003-104	0.54/9901 Sht.3 (Rev.0)
	Assembling drawing for GSSB, ASB and GSSB+ASB	GSSB & ASB 300	N/A	A2-900483-E	0.54/10045 Sht.1
	Beam for mounting the Drives	GSSB & ASB 300	N/A	MHVT0003-105	0.54/10045 Sht.2
<b>275kV, 1175 BIL</b>					
1	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1175BIL 4300mm spacing	SSBIII-300			
2	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1175BIL 4300mm spacing	SSBIII-R-300			
3	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1175BIL, 4300mm spacing	SSBIII-L-300			
4	275kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1175BIL 4300mm spacing	SSBIII-2-300			
5	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1175BIL 4300mm spacing	SSBIII-300			

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6	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1175BIL, 4300mm spacing	SSBIII-R-300			
7	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1175BIL, 4300mm spacing	SSBIII-L-300			
8	275kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1175BIL, 4300mm spacing	SSBIII-2-300			
1	275kV 3150A 50kA 110VDC In-line Motor Operated Disconnecter Without Earthing Switch 1175BIL	SSBIII	0665019	C414213-300	
2	275kV 3150A 50kA 220VDC In-line Motor Operated Disconnecter Without Earthing Switch 1175BIL	SSBIII	0665021	C414213-310	
1	275kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1175BIL	GSSB-300		C414213-370	
2	275kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1175BIL	GSSB-AM-300		C414213-372	
3	275kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1175BIL	GSSB-300		C414213-374	
4	275kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1175BIL	GSSB-AM-300		C414213-376	
1	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 4300mm spacing)	ABS-300		C414213-380	
2	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 4300mm spacing)	ABS-300		C414213-382	
3	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 5500mm spacing)	ABS-300		C414213-384	

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4	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 5500mm spacing)	ABS-300		C414213-386	
5	275kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 6700mm spacing)	ABS-300		C414213-388	
6	275kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1175BIL, 6700mm spacing)	ABS-300		C414213-390	
	Assembling drawing for SSBIII-1175	SSBIII-2-300	N/A	A2-900467	
	Cross Beam for mounting of Drives		N/A		
	Assembling drawing for GSSB, ASB and GSSB+ASB	GSSB & ASB 300			
<b>400kV, 1425 BIL</b>					
1	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 5500mm spacing	SSBIII-420	0664789	C414213-400-A	0.54/10024-Sht.1 (Rev.0)
2	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 5500mm spacing	SSBIII-R-420	0664792	C414213-401-A	0.54/10025-Sht.1 (Rev.0)
3	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 5500mm spacing	SSBIII-L-420	0664795	C414213-402-B	0.54/10026-Sht.1 (Rev.0)
4	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 5500mm spacing	SSBIII-2-420	0664797	C414213-403-A	0.54/10027-Sht.1 (Rev.0)
5	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 5500mm spacing	SSBIII-420	0664790	C414213-404-B	0.54/10024-Sht.2 (Rev.0)

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6	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 5500mm spacing	SSBIII-R-420	0664794	C414213-405-B	0.54/10025-Sht.2 (Rev.0)
7	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 5500mm spacing	SSBIII-L-420	0664796	C414213-406-B	0.54/10026-Sht.2 (Rev.0)
8	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 5500mm spacing	SSBIII-2-420	0664798	C414213-407-A	0.54/10027-Sht.2 (Rev.0)
1	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664973	C414213-410-0	0.54/10028-Sht.1 (Rev.0)
2	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664975	C414213-411-0	0.54/10029-Sht.1 (Rev.0)
3	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664977	C414213-412-0	0.54/10030-Sht.1 (Rev.0)
4	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664979	C414213-413-0	0.54/10031-Sht.1 (Rev.0)
5	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664974	C414213-414-0	0.54/10028-Sht.2 (Rev.0)
6	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664976	C414213-415-0	0.54/10029-Sht.2 (Rev.0)
7	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664978	C414213-416-0	0.54/10030-Sht.2 (Rev.0)
8	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 6500mm spacing	SSBIII	0664980	C414213-417-0	0.54/10031-Sht.2 (Rev.0)
1	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664989	C414213-420-0	0.54/10032-Sht.1 (Rev.0)

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2	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664991	C414213-421-0	0.54/10033-Sht.1 (Rev.0)
3	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664994	C414213-422-0	0.54/10034-Sht.1 (Rev.0)
4	400kV 3150A 50kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664996	C414213-423-0	0.54/10035-Sht.1 (Rev.0)
5	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664990	C414213-424-0	0.54/10032-Sht.2 (Rev.0)
6	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664993	C414213-425-0	0.54/10033-Sht.2 (Rev.0)
7	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664995	C414213-426-0	0.54/10034-Sht.2 (Rev.0)
8	400kV 3150A 50kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1425BIL, 7010mm spacing	SSBIII	0664997	C414213-427-0	0.54/10035-Sht.2 (Rev.0)
1	400kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1425BIL	GSSB-420	0665007	C414213-470-A	0.54/10036-Sht.1 (Rev.0)
2	400kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter Without Earthing Switch 1425BIL	GSSB-420	0665008	C414213-472-E	0.54/10036-Sht.2 (Rev.0)
3	400kV 3150A 50kA 110VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1425BIL	GSSB-AM-420	0665009	C414213-474-A	0.54/10037-Sht.1 (Rev.0)
4	400kV 3150A 50kA 220VDC Motor Operated Pantograph Disconnecter With Earthing Switch 1425BIL	GSSB-AM-420	0665010	C414213-476-B	0.54/10037-Sht.2 (Rev.0)
1	400kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1425 BIL, 5500mm spacing)	ABS	0665012	C414213-480-B	0.54/10038-Sht.1 (Rev.0)
2	400kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1425 BIL, 5500mm spacing)	ABS	0665014	C414213-481-A	0.54/10038-Sht.2 (Rev.0)

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3	400kV 50kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1425 BIL, 6500mm spacing)	ABS	0665015	C414213-485-0	0.54/10039-Sht.1 (Rev.0)
4	400kV 50kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1425 BIL, 6500mm spacing)	ABS	0665016	C414213-486-0	0.54/10039-Sht.2 (Rev.0)
	Assembling drawing for SSBIII-1425	SSBIII-420		A2-900474-B	0.54/10040-Sht.1 (Rev.0)
	Cross Beam for mounting of Drives (400kV, 1425BIL)	SSBIII-420		MHVT0003-106	0.54/10040-Sht.2 (Rev.0)
	Assembling drawing for GSSB, ASB and GSSB+ASB	GSSB & ASB 420	N/A	A2-900483-E	0.54/10045 Sht.2
	Beam for mounting the Drives	GSSB & ASB 420	N/A	MHVT0003-105	0.54/10045 Sht.2
<b>400kV, 1550 BIL</b>					
1	400kV 4000A 63kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1550BIL, 6500mm spacing	SSBIII-420	0502556		
2	400kV 4000A 63kA 110VDC Motor Operated Disconnecter Right Hand Earthing Switch 1550BIL, 6500mm spacing	SSBIII-R-420	0502558		
3	400kV 4000A 63kA 110VDC Motor Operated Disconnecter Left Hand Earthing Switch 1550BIL, 6500mm spacing	SSBIII-L-420	0502557		
4	400kV 4000A 63kA 110VDC Motor Operated Disconnecter Double Earthing Switch 1550BIL, 6500mm spacing	SSBIII-2-420	0502559		

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5	400kV 4000A 63kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1550BIL, 6500mm spacing	SSBIII-420	0502560		
6	400kV 4000A 63kA 220VDC Motor Operated Disconnecter Right Hand Earthing Switch 1550BIL, 6500mm spacing	SSBIII-R-420	0502562		
7	400kV 4000A 63kA 220VDC Motor Operated Disconnecter Left Hand Earthing Switch 1550BIL, 6500mm spacing	SSBIII-L-420	0502561		
8	400kV 4000A 63kA 220VDC Motor Operated Disconnecter Double Earthing Switch 1550BIL, 6500mm spacing	SSBIII-2-420	0502563		
1	400kV 63kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, 5500mm spacing)	ABS	0665613		
2	400kV 63kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, 5500mm spacing)	ABS	0665614		
	400kV 63kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, 6500mm spacing)	ABS			
	400kV 63kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, 6500mm spacing)	ABS			
5	400kV 63kA 110VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, Single Pole)	ABS	?	C414213-482-A	0.54/10049-Sht.1
6	400kV 63kA 220VDC Hand Operated Earthing Switch (Separately Mounted, 1550BIL, Single Pole)	ABS	0662014	C414213-483-A	0.54/10049-Sht.2
	Assembling drawing for SSBIII-1550	Same as SSBIII-420		A2-900474-B	0.54/10040-Sht.1 (Rev.0)
	Cross Beam for mounting of Drives	Same as SSBIII-420		MHVT0003-106	0.54/10040-Sht.2 (Rev.0)

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## Post Insulators

	275kV - Post Insulators for Double Break, Panto and ES
	275kV - Post Insulators for Panto
	400kV - Post Insulators for Double Break, Panto and ES
	400kV - Post Insulators for Panto
	400kV - Post Insulators for Double Break and ES (1550BIL)

C8-1175
T3-1175
C10-1550
T4-1550
C10-1675

SAP No.	Drives	
	Hapam	Eskom
N/A	A4-390020	0.54/9915 Sht.1 (Rev.0)
N/A	A4-390023	0.54/9915 Sht.2 (Rev.0)
N/A	A4-390022	0.54/10041-Sht.1 (Rev.0)
N/A	A4-390024	0.54/10041-Sht.2 (Rev.0)
N/A	A4-390025	0.54/10041-Sht.3 (Rev.0)

## Drives

	Motor Drive (MT200) - (For 400kV DS and Panto's)
	Motor Drive (MT200) - 110V
	Motor Drive (MT200) - 110V

Outline / General Arrangement
Wiring Diagram
Rating Plate

SAP No.	Drives	
	Hapam	Eskom
	C414213-901-B	0.54/10044 (Rev.0)
	C414213-900-D	0.54/10046 (Rev.0)
	2GKM400401P0001	0.54/10048

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	Motor Drive (MT200) - 220V	Wiring Diagram		C414213-910-C	0.54/10047 (Rev.0)
	Motor Drive (MT200) - 220V	Rating Plate		2GKM400401P0001	0.54/10048
	Motor Drive (MT200) - Open Door	Open door view		C414213-902-A	0.54/10042 (Rev.0)
	Motor Drive (MT150) - (For 275kV DS & Panto's)	Outline / General Arrangement	N/A	C414213-811-C	0.54/9914 (Rev.0)
	Motor Drive (MT150) - 110V	Wiring Diagram		C414213-800-B	0.54/9941 (Rev.0)
	Motor Drive (MT150) - 110V	Rating Plate		2GKM400401P0001	0.54/10048
	Motor Drive (MT150) - 220V	Wiring Diagram	N/A	C414213-810-E	0.54/9902 (Rev.0)
	Motor Drive (MT150) - 220V	Rating Plate		2GKM400401P0001	0.54/10048
	Motor Drive (MT150) - Open Door	Open door view		C414213-812	0.54/10043 (Rev.0)
	Manual Drive - HAC for Earthing Switches (275kV, 400kV) - Type: Lever	Outline / General Arrangement	N/A	C414213-610-B	0.54/9927 (Rev.0)
	Manual Drive - HAC for Earthing Switches (275kV, 400kV)	Wiring Diagram	N/A	C414213-600-A	0.54/9928 Sht.1
	Manual Drive - HAC for Earthing Switches (275kV, 400kV)	Rating Plate			0.54/9929 (Rev.0)
	Manual Drive - HAD-E1 for Earthing Switches (275kV, 400kV) - Type: Gear-worm	Outline / General Arrangement	N/A	C414213-660	0.54/9935 (Rev.0)
	Manual Drive - HAD-E1 for Earthing Switches (275kV, 400kV)	Wiring Diagram	N/A	C414213-650	0.54/9928 Sht.2

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	Manual Drive - HAD-E1 for Earthing Switches (275kV, 400kV)	Rating Plate			
					0.54/9929 (Rev.0)

**Table B.4: Eskom Transmission 220 kV and 550 kV disconnectors and earthing switches approved drawings as per current ENC (Adaptacc – Shandong Taikai)**

Item	Count	SAP Material No	Short Description (Material)	OEM Designation/ Type	DS- CRDB/ ES/DS- Panto	Drawing Title	Outline / GA				Interface to Eskom Steel Support Structure (NB: preferably this be a Sheet within the GA drawing, not a separate drawing) Assembly			
							Shandong Taikai Drwg number	OEM Rev	Eskom allocated 0.54 number	Eskom Rev	Shandong Taikai Drwg number	OEM Rev	Eskom allocated 0.54 number	Eskom Rev
220 kV Disconnectors and earthing switches														
00090	1	0666113	220kV 3150A 50kA 110VDC Motor Operated Disconnector Without Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252(W)/3150	DS- CRDB	0666113 _220kV 3150A 50kA 110VDC Motor Operated Disconne ctor OES	TKPE- DISCONNECTOR- A-D0101- 0666113-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0666113-01	R3	0.54/302 0.54/307	0

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00100	2	0666114	220kV 3150A 50kA 110VDC Motor Operated Disconnecter with Right Hand Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252D(W)/3150	DS- CRDB	0666114 _220kV 3150A 50kA 110VDC Motor Operated Disconne ctor RES	TKPE- DISCONNECTOR- A-D0101- 0666114-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0666114-01	R3	0.54/302 0.54/307	0
00110	3	0666115	220kV 3150A 50kA 110VDC Motor Operated Disconnecter with Left Hand Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252D(W)/3150	DS- CRDB	0666115 _220kV 3150A 50kA 110VDC Motor Operated Disconne ctor LES	TKPE- DISCONNECTOR- A-D0101- 0666115-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0666115-01	R3	0.54/302 0.54/307	0
00120	4	0666116	220kV 3150A 50kA 110VDC Motor Operated Disconnecter with Double Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252DD(W)/3150	DS- CRDB	0666116 _220kV 3150A 50kA 110VDC Motor Operated Disconne ctor DES	TKPE- DISCONNECTOR- A-D0101- 0666116-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0666116-01	R3	0.54/302 0.54/307	0

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00130	5	0666117	220kV 3150A 50kA 220VDC Motor Operated Disconnecter Without Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252(W)/3150	DS- CRDB	0666117 _220kV 3150A 50kA 220VDC Motor Operated Disconne ctor OES	TKPE- DISCONNECTOR- A-D0101- 0666117-01	R3	0.54/9876	0	TKPE- DISCONNECTOR- A-D0101- 0666117-01	R3	0.54/302 0.54/307	0
00140	6	0666118	220kV 3150A 50kA 220VDC Motor Operated Disconnecter with Right Hand Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252D(W)/3150	DS- CRDB	0666118 _220kV 3150A 50kA 220VDC Motor Operated Disconne ctor RES	TKPE- DISCONNECTOR- A-D0101- 0666118-01	R3	0.54/9877	0	TKPE- DISCONNECTOR- A-D0101- 0666118-01	R3	0.54/302 0.54/307	0
00150	7	0666119	220kV 3150A 50kA 220VDC Motor Operated Disconnecter with Left Hand Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252D(W)/3150	DS- CRDB	0666119 _220kV 3150A 50kA 220VDC Motor Operated Disconne ctor LES	TKPE- DISCONNECTOR- A-D0101- 0666119-01	R3	0.54/9888	0	TKPE- DISCONNECTOR- A-D0101- 0666119-01	R3	0.54/302 0.54/307	0

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00160	8	0666120	220kV 3150A 50kA 220VDC Motor Operated Disconnecter with Double Earthing Switch 1050BIL, 4300mm spacing	GW7F- 252DD(W)/3150	DS- CRDB	0666120 _220kV 3150A 50kA 220VDC Motor Operated Disconne ctor DES	TKPE- DISCONNECTOR- A-D0101- 0666120-01	R3	0.54/9889	0	TKPE- DISCONNECTOR- A-D0101- 0666120-01	R3	0.54/302 0.54/307	0
00250	9	0666121	220kV 50kA Hand Operated Earthing Switch (Separately Mounted, 1175 BIL, 4300mm 110VDC)	JW7-252	ES	0666121 _220kV 50kA Hand Operated Earthing Switch_1 10VDC	TKPE- DISCONNECTOR- A-D0101- 0666121-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0666121-01	R3	0.54/302 0.54/307	2
00260	10	0666122	220kV 50kA Hand Operated Earthing Switch (Separately Mounted, 1175 BIL, 4300mm 220VDC)	JW7-252	ES	0666122 _220kV 50kA Hand Operated Earthing Switch_2 20VDC	TKPE- DISCONNECTOR- A-D0122- 666122-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0122- 666122-01	R3	泰开填写 此处 wiring的 设计参考 的eskom 图纸编号 和版本号 ( 0.54/302 )	2

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00210	11	0665974	220kV 3150A 50kA 110VDC 31mm/kV Motor Operated Pantograph Disconnecter Without Earthing Switch 1050BIL	GW6A- 252(W)/3150	DS- Panto	0665974 _220kV 3150A 50kA 110VDC Pantogra ph Disconne ctor OES	TKPE- DISCONNECTOR- A-D0101- 0665974-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0665974-01	R3	0.54/302 0.54/307	0
00230	12	0665975	220kV 3150A 50kA 220VDC 31mm/kV Motor Operated Pantograph Disconnecter Without Earthing Switch 1050BIL	GW6A- 252D(W)/3150	DS- Panto	0665975 _220kV 3150A 50kA 220VDC Pantogra ph Disconne ctor OES	TKPE- DISCONNECTOR- A-D0101- 0665975-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0665975-01	R3	0.54/302 0.54/307	0
00220	13	0665976	220kV 3150A 50kA 110VDC 31mm/kV Motor Operated Pantograph Disconnecter With Earthing Switch 1050BIL	GW6A- 252(W)/3150	DS- Panto	0665976 _220kV 3150A 50kA 110VDC Pantogra ph Disconne ctor 1ES	TKPE- DISCONNECTOR- A-D0101- 0665976-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0665976-01	R3	0.54/302 0.54/307	0

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00240	14	0665977	220kV 3150A 50kA 220VDC 31mm/kV Motor Operated Pantograph Disconnecter With Earthing Switch 1050BIL	GW6A- 252D(W)/3150	DS- Panto	0665977 _220kV 3150A 50kA 220VDC Pantogra ph Disconne ctor 1ES	TKPE- DISCONNECTOR- A-D0101- 0665977-01	R3	0.54/	0	TKPE- DISCONNECTOR- A-D0101- 0665977-01	R3	0.54/302 0.54/307	0
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Item	Cou nt	SAP Material No	Short Description (Material)	OEM Designation / Type	DS- CRDB/ ES/DS- Panto	Drawing Title	Outline / GA				Interface to Eskom Steel Support Structure <i>(NB: preferably this be a Sheet within the GA drawing, not a separate drawing) Assembly</i>				
							Shandong Taikai Drwg number	OE M Rev	Eskom allocated 0.54 number	Esk om Rev	Shandong Taikai Drwg number	OE M Rev	Eskom allocated 0.54 number	Esk om Rev	
550 kV Disconnectors and earthing switches															
00270	15	0666133	550kV 4000A 63kA 110VDC Motor Operated Disconnecter Without Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550(W)/4000	DS-CRDB	0666133_5 50kV 4000A 63kA 110VDC Motor Operated Disconnect or OES	TKPE- DISCONNECTOR -A-D0101- 0666133-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666133-01	R3	0.54/305 0.54/307	0	

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00280	16	066613 4	550kV 4000A 63kA 110VDC Motor Operated Disconnect Right Hand Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550D(W)/400 0	DS-CRDB	0666134_5 50kV 4000A 63kA 110VDC Motor Operated Disconnect or RES	TKPE- DISCONNECTOR -A-D0101- 0666134-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666134-01	R3	0.54/305 0.54/307	0
00290	17	066613 6	550kV 4000A 63kA 110VDC Motor Operated Disconnect Left Hand Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550D(W)/400 0	DS-CRDB	0666136_5 50kV 4000A 63kA 110VDC Motor Operated Disconnect or LES	TKPE- DISCONNECTOR -A-D0101- 0666136-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666136-01	R3	0.54/305 0.54/307	0
00300	18	066613 7	550kV 4000A 63kA 110VDC Motor Operated Disconnect Double Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550DD(W)/40 00	DS-CRDB	0666137_5 50kV 4000A 63kA 110VDC Motor Operated Disconnect or DES	TKPE- DISCONNECTOR -A-D0101- 0666137-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666137-01	R3	0.54/305 0.54/307	0
00310	19	066613 8	550kV 4000A 63kA 220VDC Motor Operated Disconnect Without Earthing Switch 1425BIL,	GW7F- 550(W)/4000	DS-CRDB	0666138_5 50kV 4000A 63kA 220VDC Motor	TKPE- DISCONNECTOR -A-D0101- 0666138-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666138-01	R3	0.54/305 0.54/307	0

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			5500mm spacing			Operated Disconnect or OES								
00320	20	066613 9	550kV 4000A 63kA 220VDC Motor Operated Disconnect Right Hand Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550D(W)/400 0	DS-CRDB	0666139_5 50kV 4000A 63kA 220VDC Motor Operated Disconnect or RES	TKPE- DISCONNECTOR -A-D0101- 0666139-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666139-01	R3	0.54/305 0.54/307	0
00330	21	066614 0	550kV 4000A 63kA 220VDC Motor Operated Disconnect Left Hand Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550D(W)/400 0	DS-CRDB	0666140_5 50kV 4000A 63kA 220VDC Motor Operated Disconnect or LES	TKPE- DISCONNECTOR -A-D0101- 0666140-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666140-01	R3	0.54/305 0.54/307	0
00340	22	066614 1	550kV 4000A 63kA 220VDC Motor Operated Disconnect Double Earthing Switch 1425BIL, 5500mm spacing	GW7F- 550DD(W)/40 00	DS-CRDB	0666141_5 50kV 4000A 63kA 220VDC Motor Operated Disconnect or DES	TKPE- DISCONNECTOR -A-D0101- 0666141-01	R3	0.54/	0	TKPE- DISCONNECTOR -A-D0101- 0666141-01	R3	0.54/305 0.54/307	0

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Table B.5: List of the pre-approved HV equipment – Disconnectors and Earthing switches (from recent expired ENC's)

4600040016	22 to 132 kV Isolators< Earth Switch & SPI	DSB24, DSB36, DSB72, DSB120	ACTOM High Voltage Equipment	ACTOM - Knights, South Africa	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4600065601	22 to 132 kV Isolators< Earth Switch & SPI	DSB24, DSB36, DSB72, DSB120	ACTOM High Voltage Equipment	ACTOM - Knights, South Africa	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4650013289	22 to 400 kV Isolators< Earth Switch & SPI	275kV S3CD(T) 400kV S3CD(T)	ACTOM High Voltage Equipment	Alstom/ AREVA/ GE – Noventa di Piave, Italy	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4670002090	22 to 400 kV Isolators< Earth Switch & SPI	275kV S3CD(T) 400kV S3CD(T)	ACTOM High Voltage Equipment	Alstom/ AREVA/ GE – Noventa di Piave, Italy	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
4600058333	22 to 400 kV Isolators< Earth Switch & SPI	275kV S3CD(T) 400kV S3CD(T)	ACTOM High Voltage Equipment	Alstom/ AREVA/ GE – Noventa di Piave, Italy	Thando Nkosi	Tel: (0) 11 820 5358, Mobile: (0) 64 890 9775, email: thando.nkosi@actom.co.za	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413
N/A	765 kV Isolators< Earth Switch & SPI	765kV SPOL(T)	ACTOM High Voltage Equipment	Alstom/ AREVA/ GE Grids – Noventa di Piave, Italy		Actom High Voltage	Actom High Voltage Equipment, 2 Magnet Road, Knights, Germiston 1413

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N/A	765 kV Separately Mounted Earthing Switches	ASB-800	HTSA	HAPAM - Amersfoort, Netherlands		Mega High Voltage Technologies (Pty) Ltd	Mega High Voltage Technologies (Pty) Ltd, 397 Crescent, 2 Summit Square, Unit 4, Corporate Part North Midrand
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## Annex C – List of pre-approved HV equipment – Power Transformers and Reactors



Date:  
23 September 2022

Enquiries: Sidwell Mtetwa  
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To Whom It May Concern

Factories currently technically accredited by Eskom for Transmission Transformers & Reactors

1. Factories that are technically accredited

Below is a list of factories that are currently technically evaluated and qualified for compliance to Eskom's technical and SHEQ specifications, and their accreditation is valid for supply of high voltage (Class 3), extra-high voltage (Class 4) and specialized (HVDC) transformers and reactors.

- Fuji Electric – Chiba factory (Class 3; Class 4)
- General Electric – Gebze, Turkey (Class 3; Class 4)
- Hitachi Energy – Bad Honnef, Germany (Class 3)
- Hitachi Energy – Sao Paulo, Brazil (Class 3; Class 4; HVDC)
- Hitachi Energy – Ludvika, Sweden (Class 3; Class 4; HVDC)
- Hitachi Energy – Vadodara, India (Class 3; Class 4; HVDC)
- Hyosung Heavy Industries – Chang Won, South Korea (Class 3)
- Hyundai Heavy Industries – Ulsan, South Korea (Class 3)
- SGB Smit Power Matla – Pretoria, South Africa (Class 3)
- Siemens – Zagreb, Croatia (Class 3; HVDC)
- Siemens – Jundiai, Brazil (Class 3; Class 4; HVDC)
- Siemens – Weiz, Austria (Class 3; Class 4)
- WEG Transformer – Betim, Brazil (Class 3; Class 4)
- WEG Transformer – Blumenau, Brazil (Class 3)

2. Meaning of the list

- This letter is valid until September 2023 or until communicated otherwise before then.
- The list is not intended to prohibit any factory from participating in Eskom tenders. When using factories that are outside this list, the procurement program must allow for a factory accreditation exercise by Eskom personnel or appointed body.
- Accreditation does not mean wholesale design approval. Each factory will be in possession of design approvals for a given size of a transformer. Where there is no design approval, a design review and approval will be required before transformer materials are ordered.

Transmission  
Asset Management  
1 Maxwell Drive, Sunninghill  
Private Bag 1091, Sunninghill, Johannesburg SA  
Tel +27 11 800 4659 Fax +27 11 800 8111 www.eskom.co.za  
Eskom Holdings SOC Ltd Reg No 2002/016527/30

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- Factory accreditation does not mean that a company is guaranteed Eskom orders. Their participation in an Eskom commercial process is still required.
- Factories that are not accredited are not prohibited or restricted in any way from tendering for Eskom work. They will be evaluated at the right time during the tender evaluation stage, subject to meeting certain minimum technical and non-technical compliance.

Yours sincerely



Prince Moyo

GENERAL MANAGER: TRANSMISSION ASSET MANAGEMENT