

## TRANSFORMER AND SWITCHGEAR SERVICES

### Scope of work – Supply and Delivery of Transformer Conservator Air cells (Flexible Separator)

The scope of work covers the supply and delivery of Transformer air cells to the Purchaser's premises in Rosherville for a period of three years. The contract does not guarantee that any specific quantity of aircells will be bought over the period of the contract. The transformer air cells will be purchased for transformer repair and rewind projects on an "as-and-when-required" basis. The scope includes making available and providing of technical expertise and support with regards to the incorporation and use of the components that are supplied to the Purchaser under this contract. The general use of such expertise will be deemed to be included in the prices quoted for the items in the schedule.

A detailed list of all items required under this contract is given below.

### Functional specification


#### Function:

**Air cell or Air Bag** is a rubber bag inside the conservator tank that isolates the transformer oil from the atmosphere, preventing contamination and compensating for oil volume changes due to temperature fluctuations

- **Isolates Oil:** The air cell acts as a barrier between the transformer oil and the atmosphere, preventing moisture, gases, and other contaminants from entering the oil.
- **Compensates for Oil Volume Changes:** As the transformer oil heats up and cools down, it expands and contracts. The air cell inflates or deflates to accommodate these volume changes, preventing the oil from overflowing or creating a vacuum in the conservator tank.
- **Reduces Oxidation and Condensation:** By preventing direct contact between the oil and air, the air cell minimizes oxidation and condensation within the transformer, which can degrade the insulation and reduce the transformer's lifespan.
- **Suppresses Gas Bubble Formation:** The air cell also helps to suppress the formation of gas bubbles in the transformer oil, which can interfere with the transformer's operation

### Delivery requirements

- Materials must be delivered to T&SS Receipt and Dispatch premises in Lower Germiston Road
- All costs for delivery must be included in the quoted price for the material.
- Material must be protected against damage, moisture and dirt.
- Offloading facilities and labour will be provided by the purchaser



Tel:  
Fax:  
Cell:  
E-mail:

### Technical specification

High resistance, 300daN, polyester fabric coated with NBR/NPVC rubber and assembled by hot vulcanization

Storage Temperature: from -20 to +110°C in storage

Operating temperature: from -50 to + 110 °C in mineral oil

Accessories: Flange type: B1

Flange position: 45°


Flange location: Centred

Lug position: Horizontal

All components to be supplied under this contract must be fit for purpose and match the operational life expectancy of the transformer, which is 35 - 40 years. Components must meet the minimum standards stipulated in the relevant and latest Eskom standard for each component, as well as the "SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE", unique identifier 240-68973110R2. Components must have standard mountings and dimensions as indicated in the descriptions.

Item	Description	Unique identifier
1	"SPECIFICATION FOR POWER TRANSFORMERS RATED FOR 1.25MVA AND ABOVE AND WITH HIGHEST VOLTAGE OF 2.2KV OR ABOVE", unique identifier 240-68973110 latest revision	240-68973110

Approved by: Tshepiso Nonyane

Signature: 

Date: 13/08/2025



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