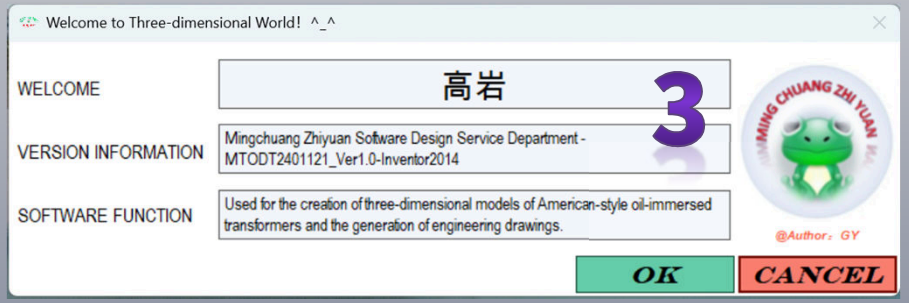
Three-dimensional Automatic Drawing Software Brief Introduction

Pad-mounted Transformer

SOFTWARE INTRODUCTION SECTION

Program Startup , Language Choice and Welcome Interface

1. Program Startup Interface
2. Language Choice Interface
3. Welcome Interface



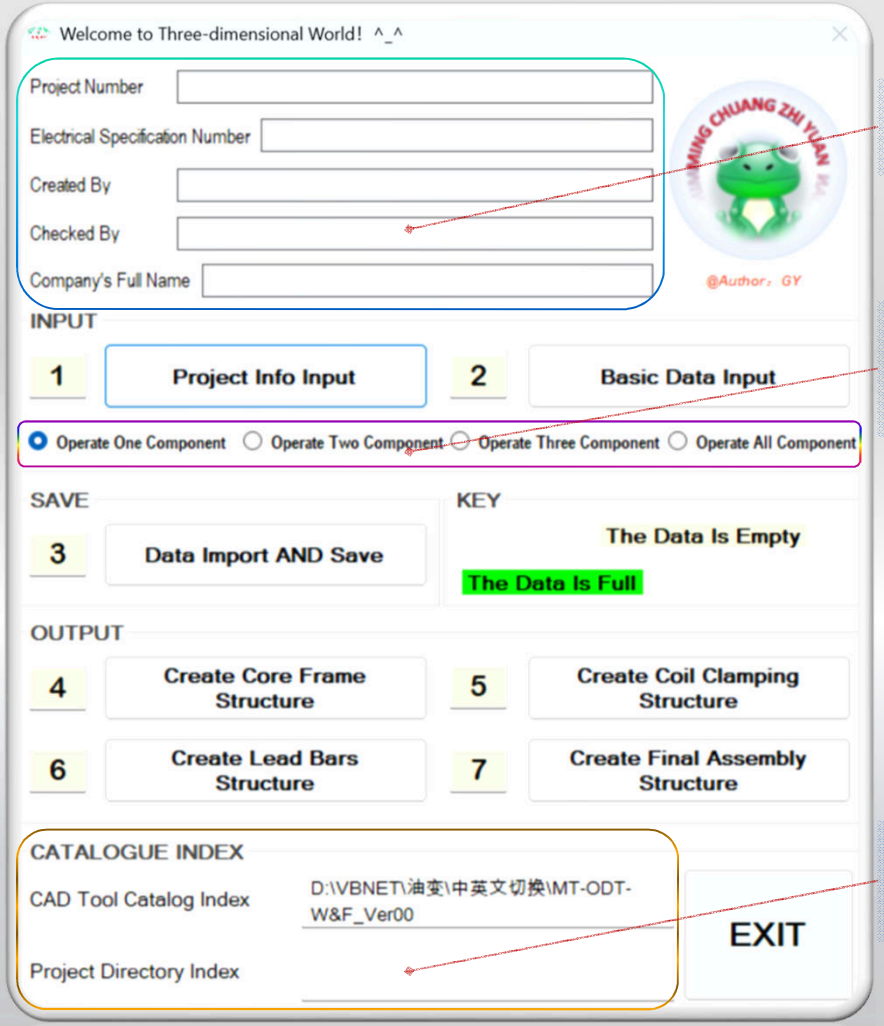
Main Interface Of the Software

The software consists of three modules

As the figure shows:

1. Project information and product data input module **(Item 1,2);**
2. Product data write-in module **(Item 3);**
3. Output of 3D models and engineering drawings module **(Item 4,5,6,7).**

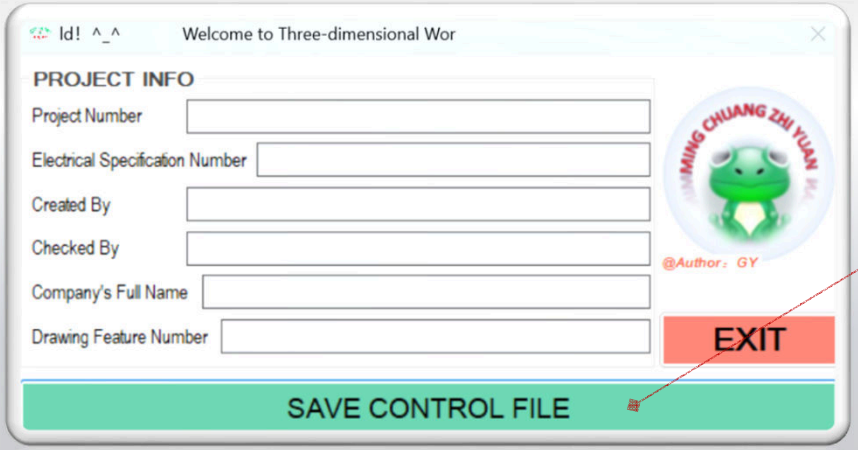
Item 4,5,6 and 7 are divided into 4 modules based on the manufacturing process of the transformer. Based on the options, you can choose to run several modules at once or run all the modules.



Project Information Input Interface

As the figure shows:

The picture below is the input interface for project information. By clicking on item 1 in the main interface of the software, this interface will be displayed.



After completing the project information filling, click this button to save the control file.

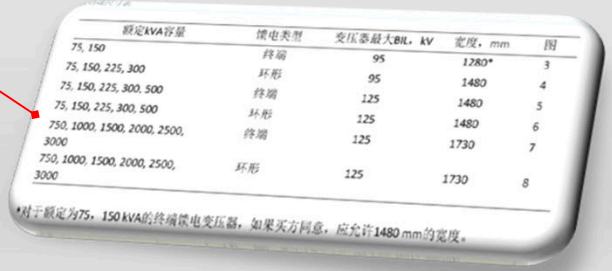
The storage directory needs to be created before running the software.

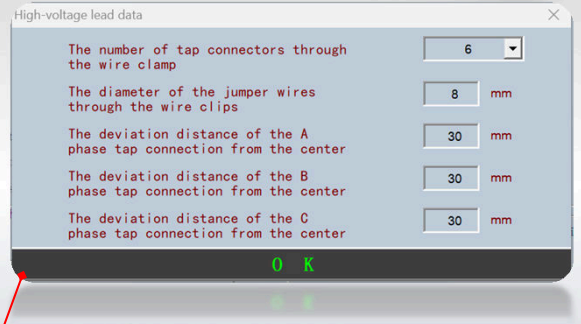
Basic Data Input Interface

As the figure shows:

The picture is the Basic Data Input Interface.

Various structural options need to be selected manually. The basic data can be filled in manually, or it can be automatically read by clicking the "READ DATA" button.





Click this button to enter the independent input interface for the high-voltage lead.

Core Data Input Interface

As the figure shows:

The picture is the Core Data Input Interface.

Various options need to be selected manually.

The core data can be filled in manually, or it can be automatically read by clicking the "READ DATA" button.

Tank Data Input Interface

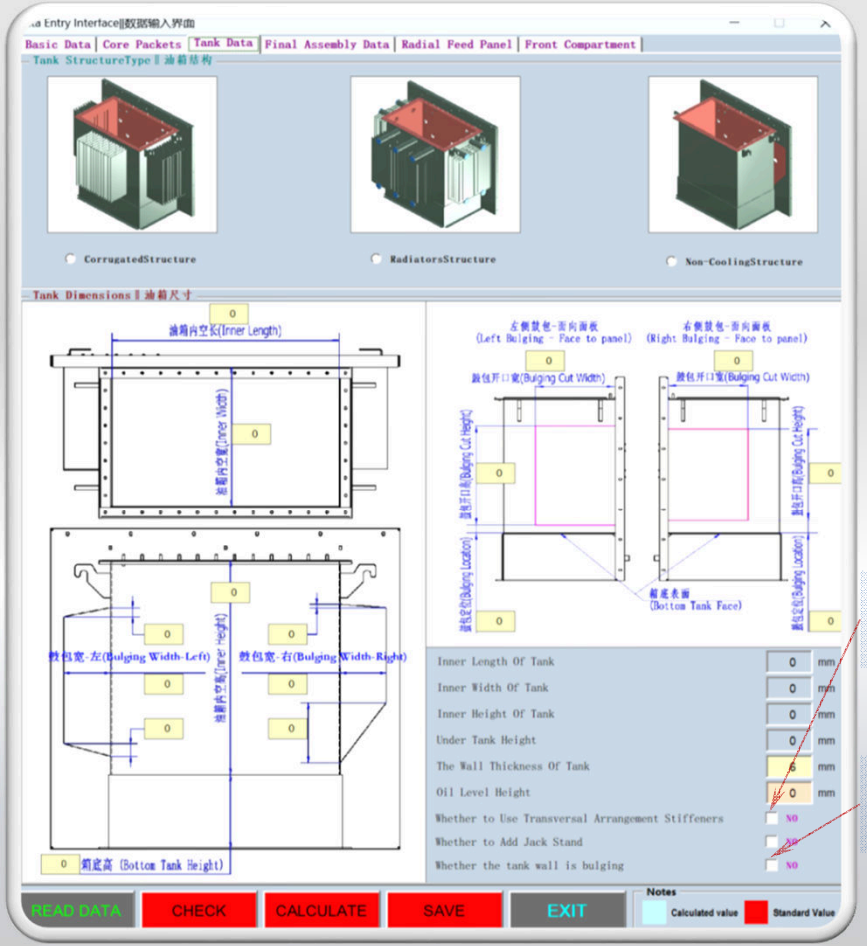
As the figure shows:

The picture is the Tank Data Input Interface.

Various options need to be selected manually.

The tank data can be filled in manually, or it can be automatically read by clicking the "READ DATA" button.

The details of each option will be introduced separately below.



Horizontal Ribs option

Tank Wall Bulge option

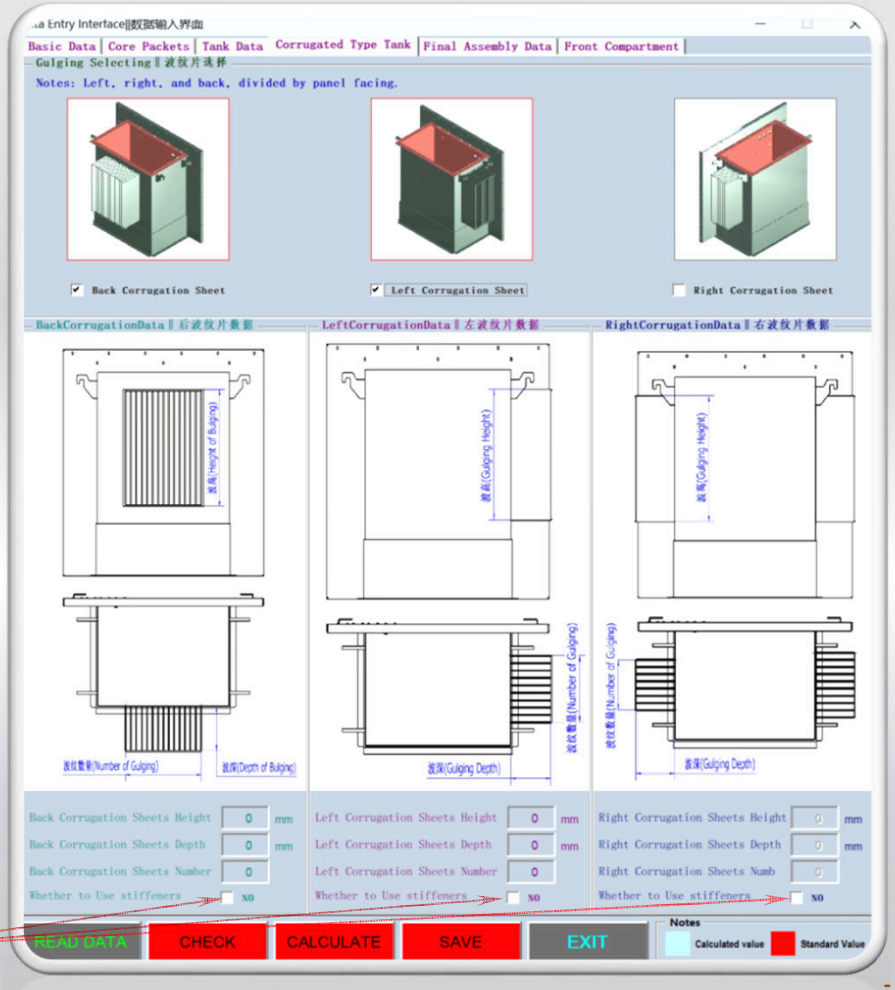
Corrugated Sheets Heat Dissipation Structure Tank

As the figure shows:
The tank has three sides that can be welded with corrugated sheets.

On each side, you can choose whether to weld the corrugated sheets.

For the side with corrugated sheets, if you want to weld additional strengthening ribs, then only vertical reinforcing ribs can be welded.

For the side without corrugated sheets, you can choose to weld vertical ribs or horizontal ribs, or you can do nothing at all.



Vertical Ribs Option
Can arrangement Multi-ribs

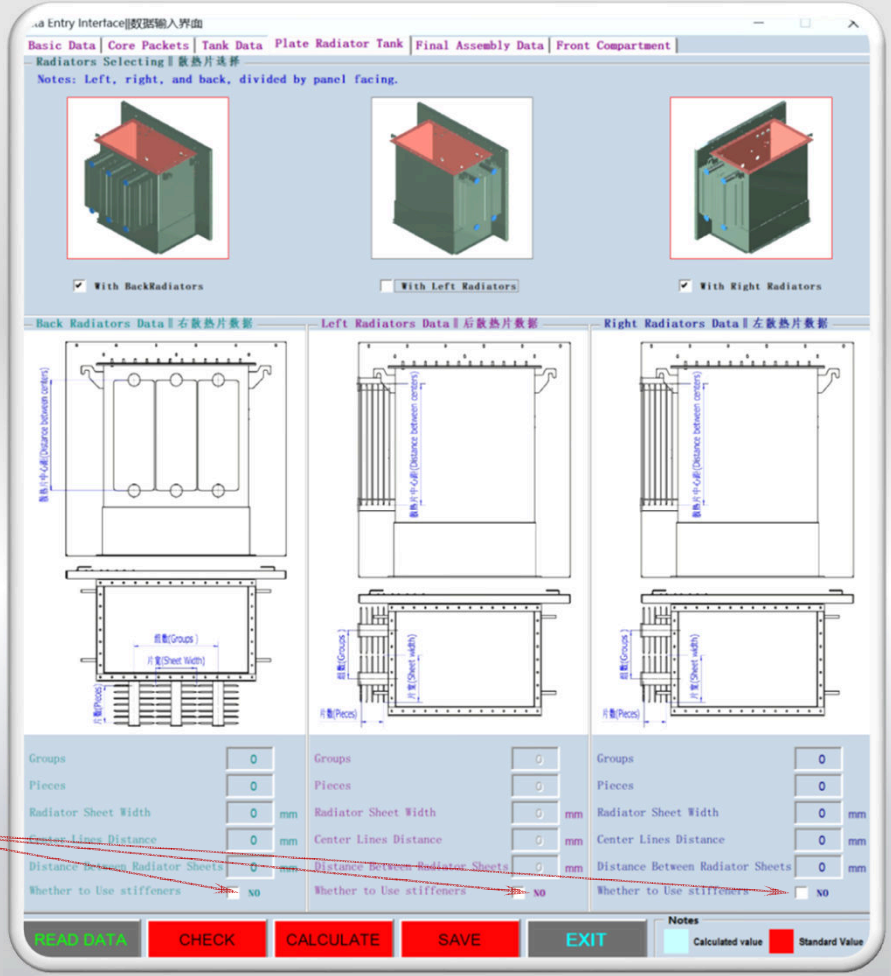
Radiators Heat Dissipation Structure Tank

As the figure shows:
The tank has three sides that can be welded with Radiators.

On each side, you can choose whether to weld the Radiators.

For the side with Radiators, if you want to weld additional strengthening ribs, You can weld vertical strengthening ribs or horizontal strengthening ribs or nothing at all

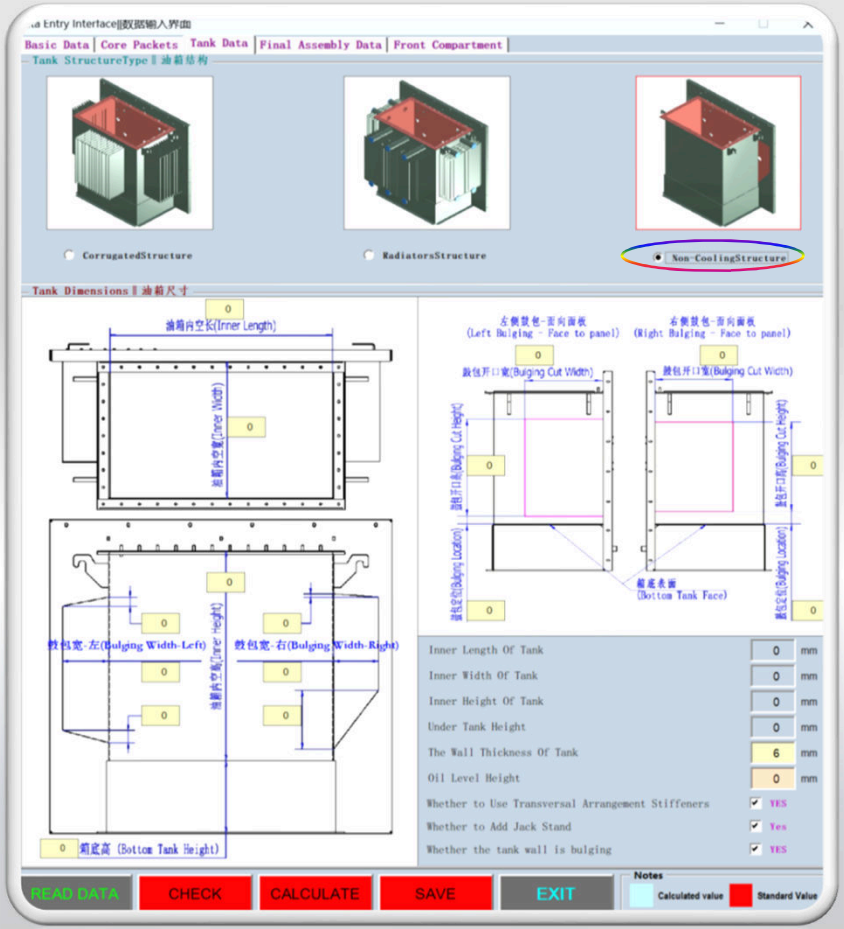
Vertical Ribs Option
Can arrangement Multi-ribs



No Cooling Devices Structure Tank

As the figure shows:

As marked in the figure, if not need cooling device and any strengthening ribs, Please select this option.



Transversal Stiffeners and Bulge Of the Tank Wall Input Interface

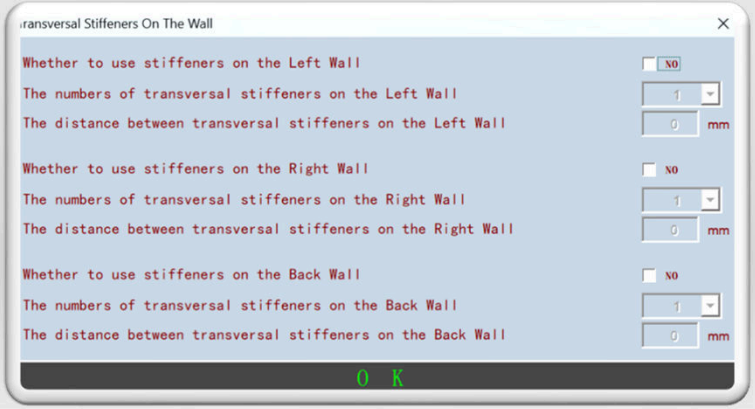


Figure 1

As the figure 1 shows:

This is transversal stiffeners input interface on the each tank wall.

As the figure 1 shows:

This is bulge input interface on the side tank wall. If tank length is too small, then can weld the bulges.

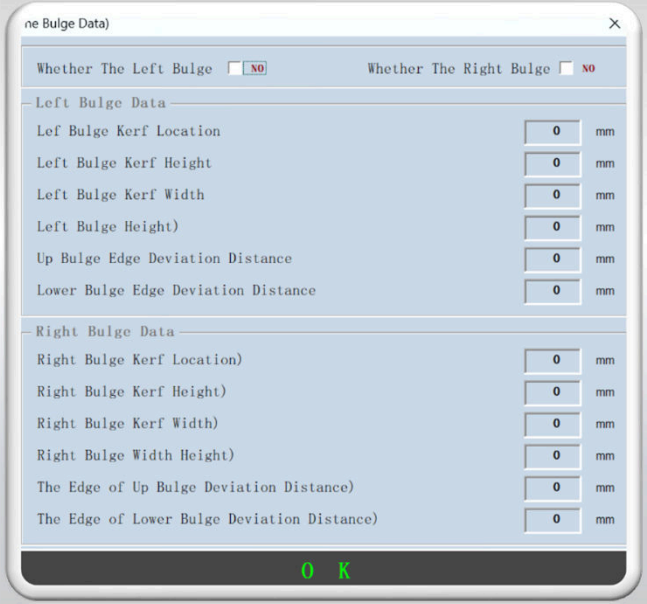


Figure 2

Final Assembly Input Interface

As the figure shows:

This is the final assembly input interface. The main focus is on the selection of various accessories for the transformer and the determination of their placement locations.

Final Assembly Input Interface

As the figure 1 shows:

This is the attachments of the Radial Feed Type placement locations input interface.

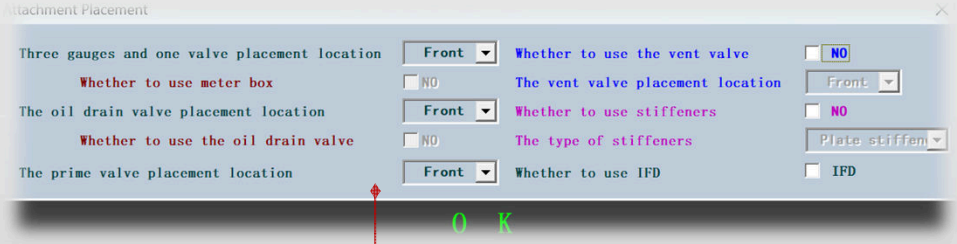


Figure 1

As the figure 2 shows:

This is a portion of the attachments placement locations input interface.

They can choose to place on the side of the Tank as needed.

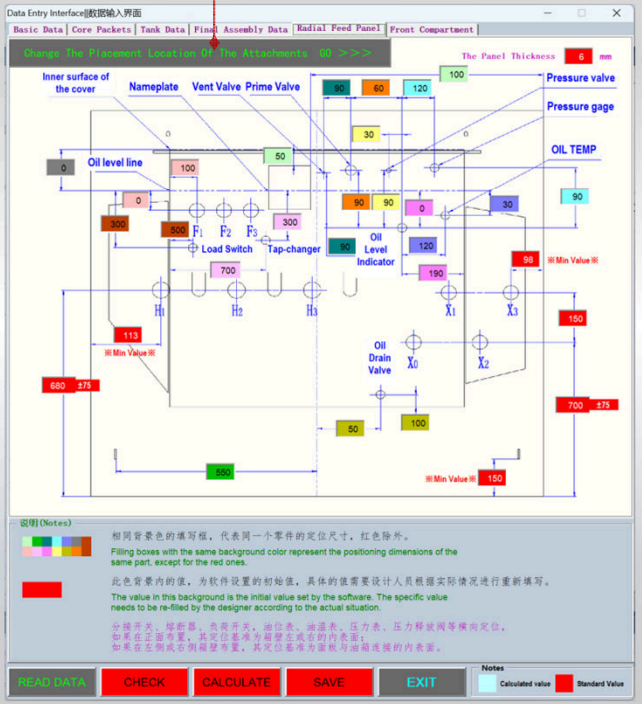


Figure 2

Final Assembly Input Interface

As the figure 1 shows:

This is the attachments of the Loop Feed Type placement locations input interface.

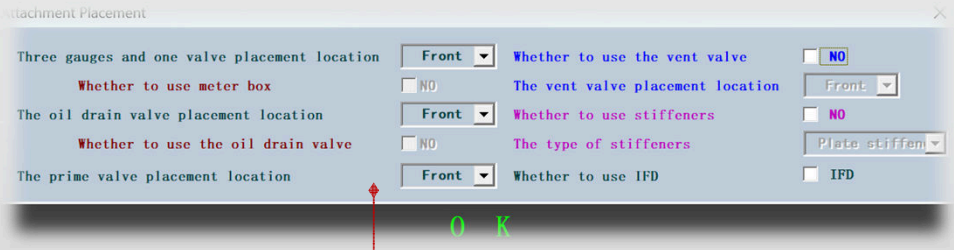


Figure 1

As the figure 2 shows:

This is a portion of the attachments placement locations input interface.

They can choose to place on the side of the Tank as needed.

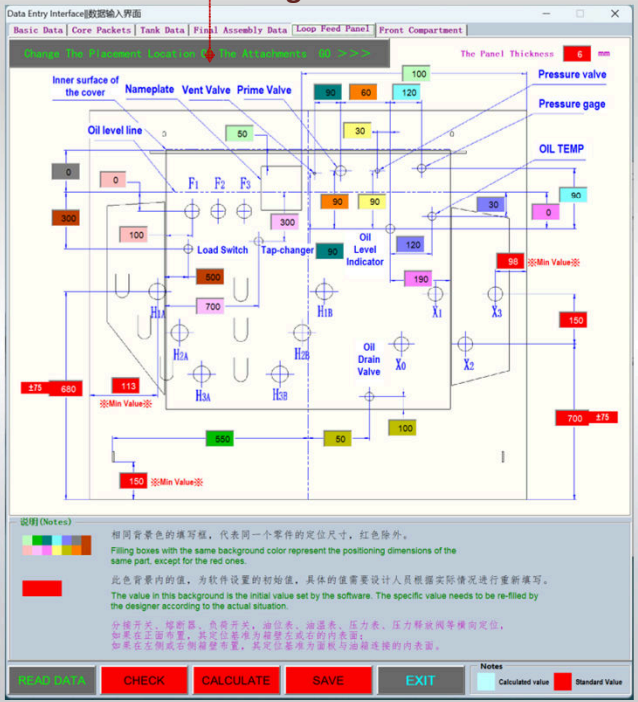
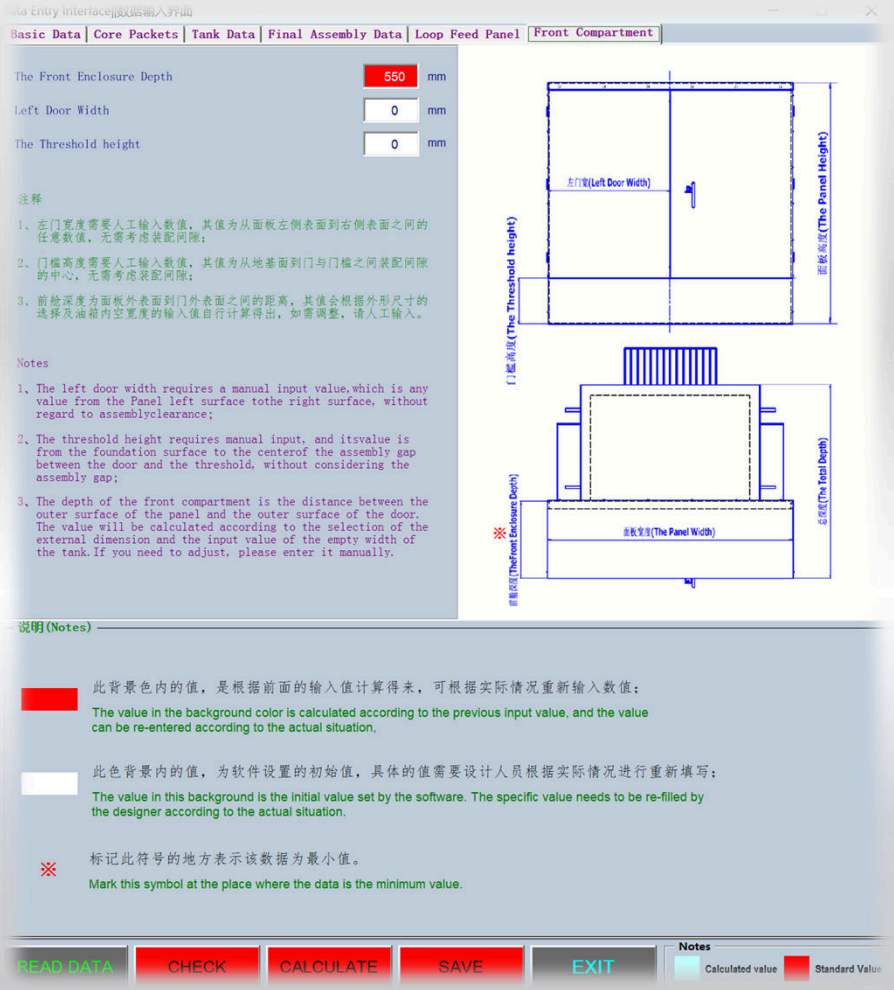


Figure 2

The Front Compartment Input Interface

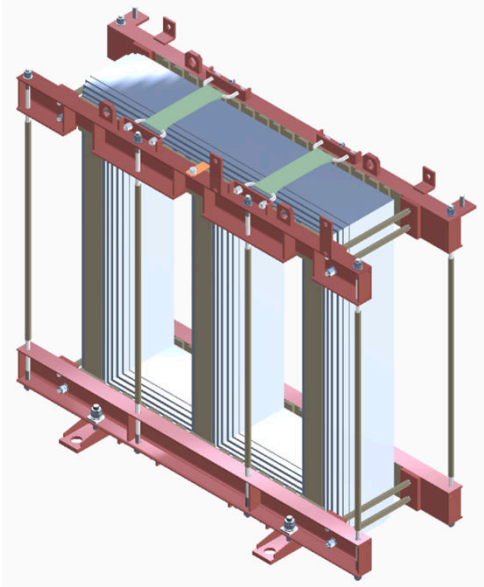
As the figure shows:

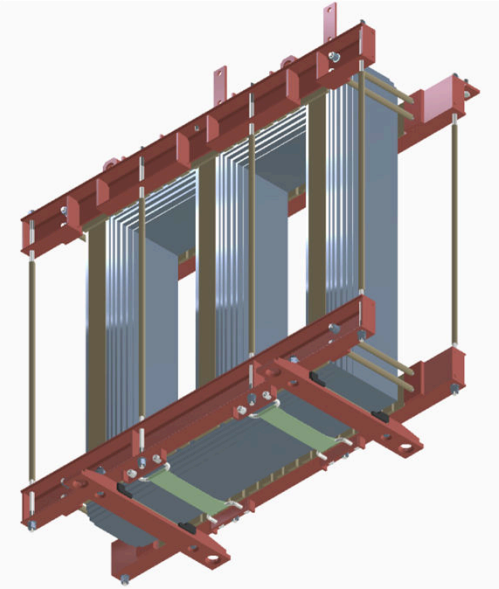
This is The Front Compartment Input Interface. Need to manual input the "**Left Door Width**" and "**Threshold Height**".



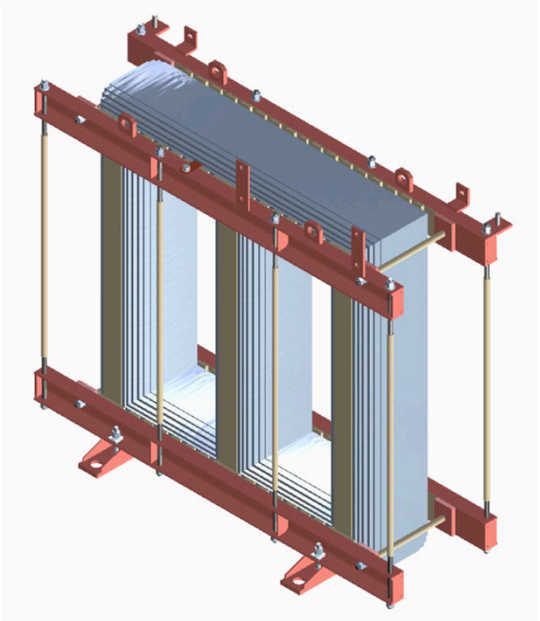
TRANSFORMER STRUCTURE SECTION

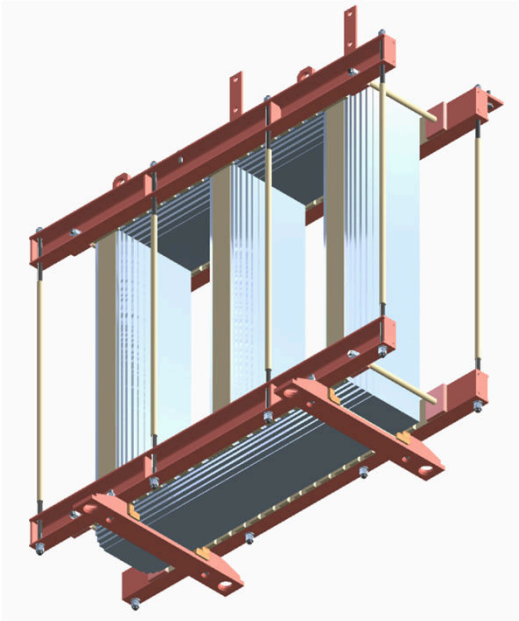
A RELATIVELY COMMON CORE STRUCTURE



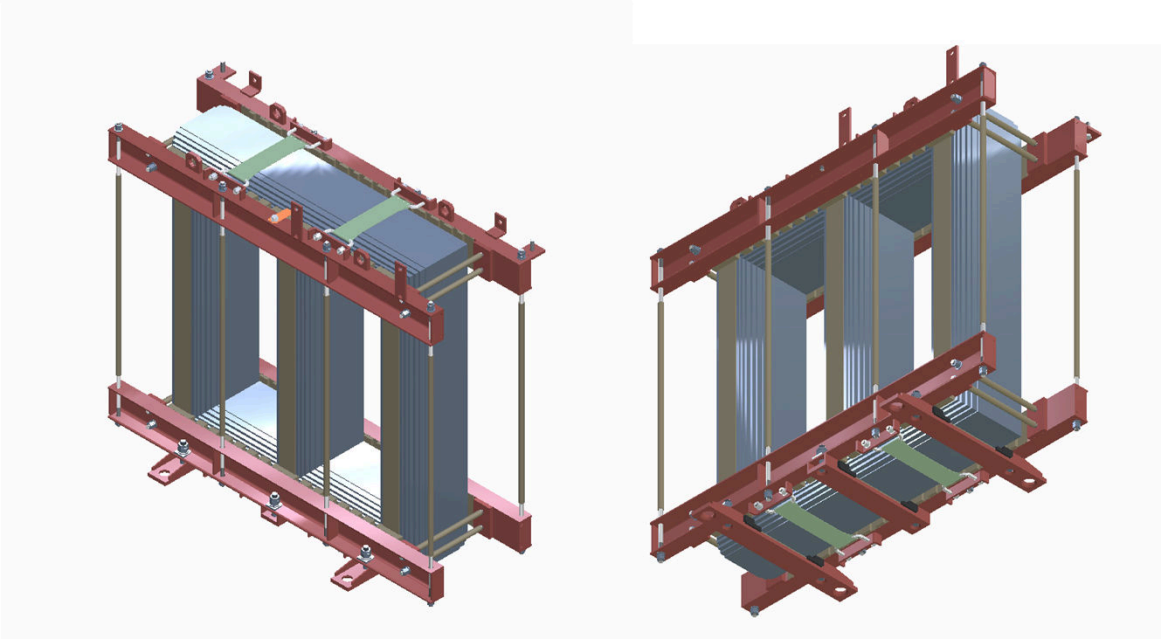


A COMMON CORE STRUCTURE FOR CAPACITIES BELOW 500kVA



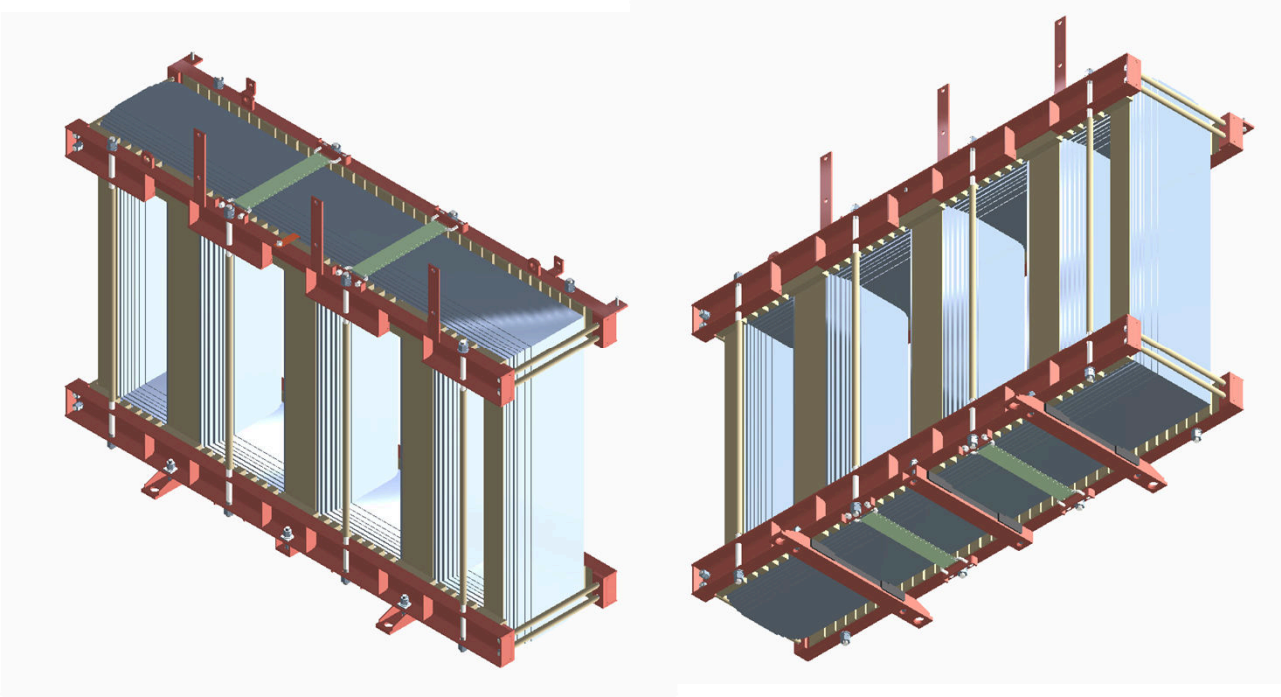


A COMMON CORE STRUCTURE FOR HIGH CAPACITY



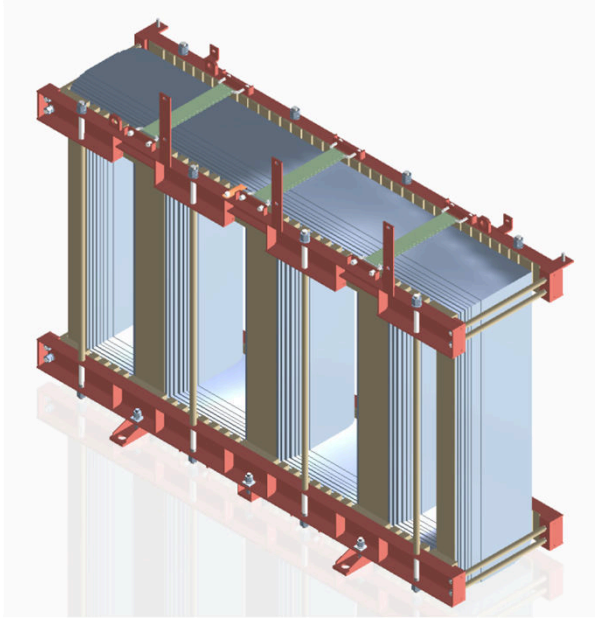
Core Frame Structure - Five Limbs

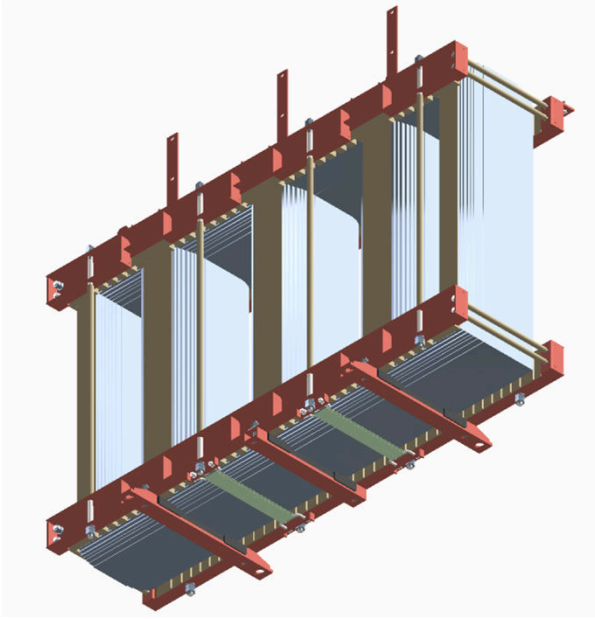
A COMMON CORE STRUCTURE APPROPRIATE FOR BIL≤95kV



Core Frame Structure - Five Limbs

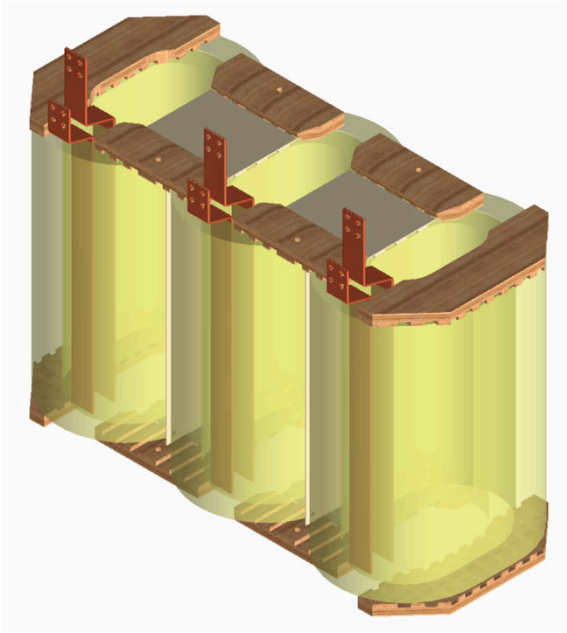
A COMMON CORE STRUCTURE APPROPRIATE FOR BIL＞95kV

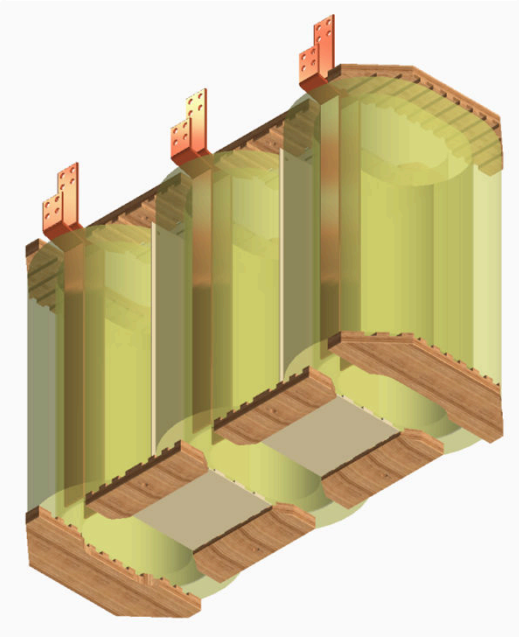




Coil Clamping Structure - Three Limbs

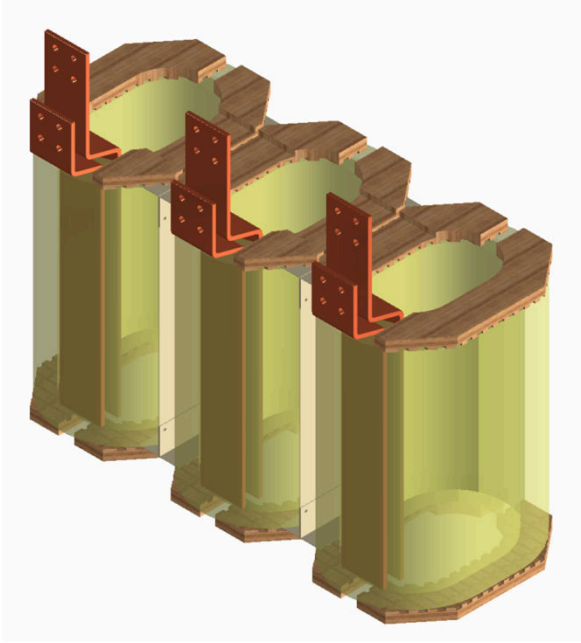
A COMMON COIL CLAMPING STRUCTURE APPROPRIATE FOR BIL≤95kV

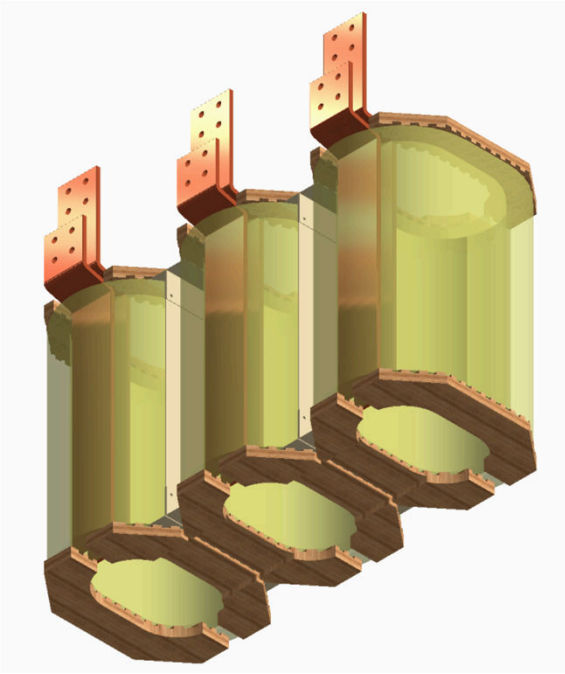




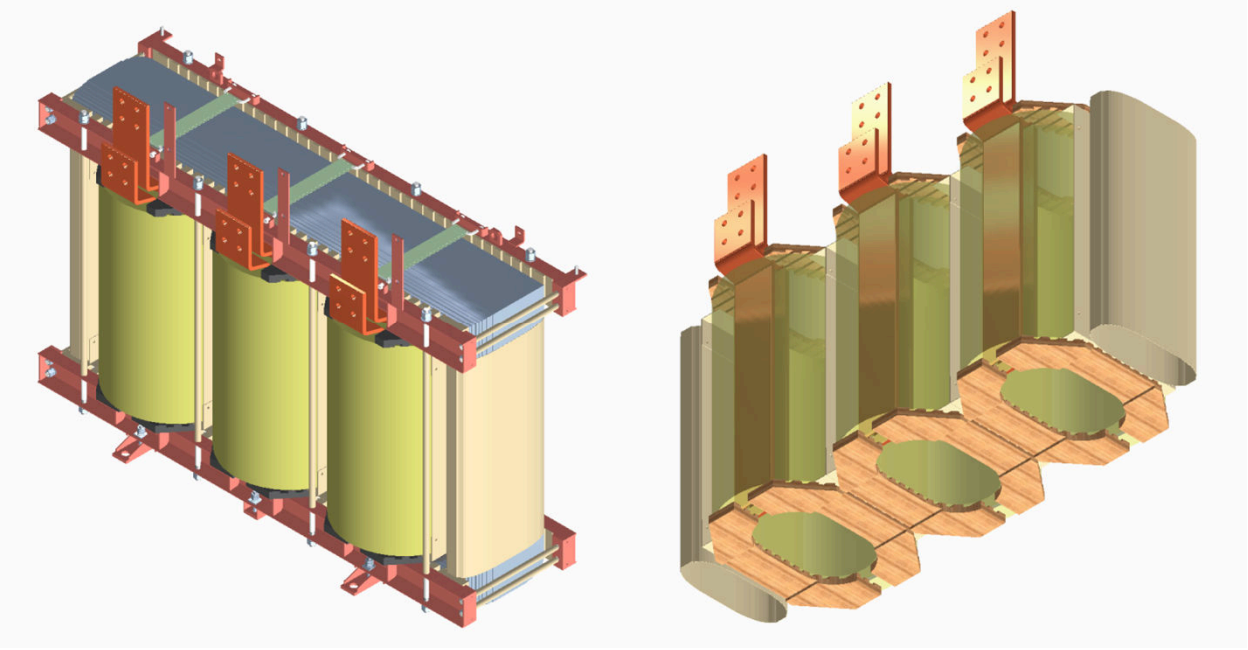
Coil Clamping Structure - Three Limbs

A COMMON COIL CLAMPING STRUCTURE APPROPRIATE FOR BIL＞95kV



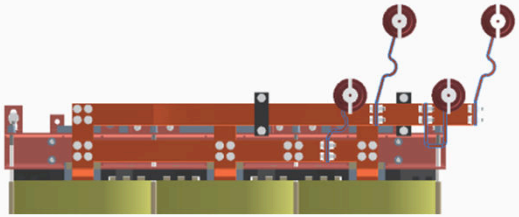


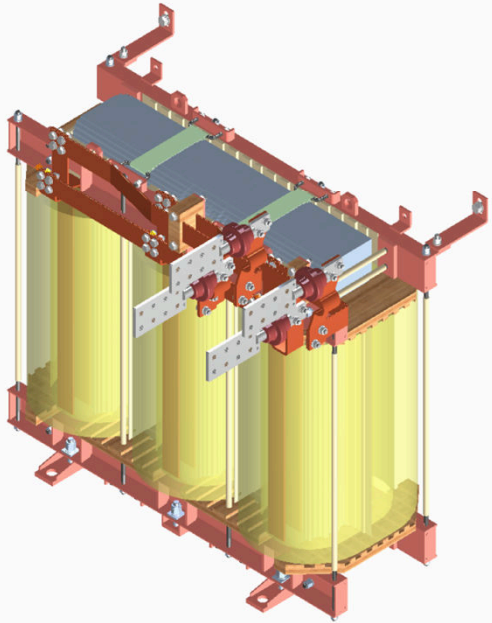
A COMMON COIL CLAMPING STRUCTURE APPROPRIATE FOR BIL＞95kV

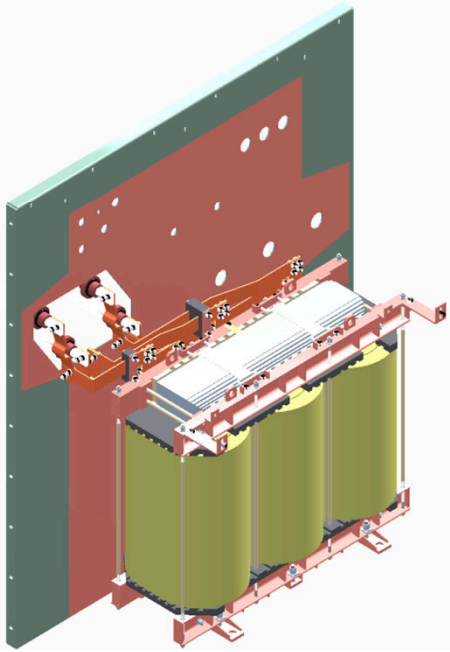


L.V. Lead Bars Structure - Three Limbs

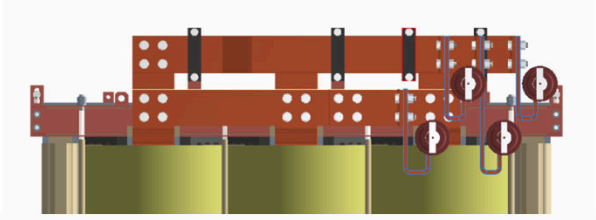
A star-connected L.V. LEAD STRUCTURE

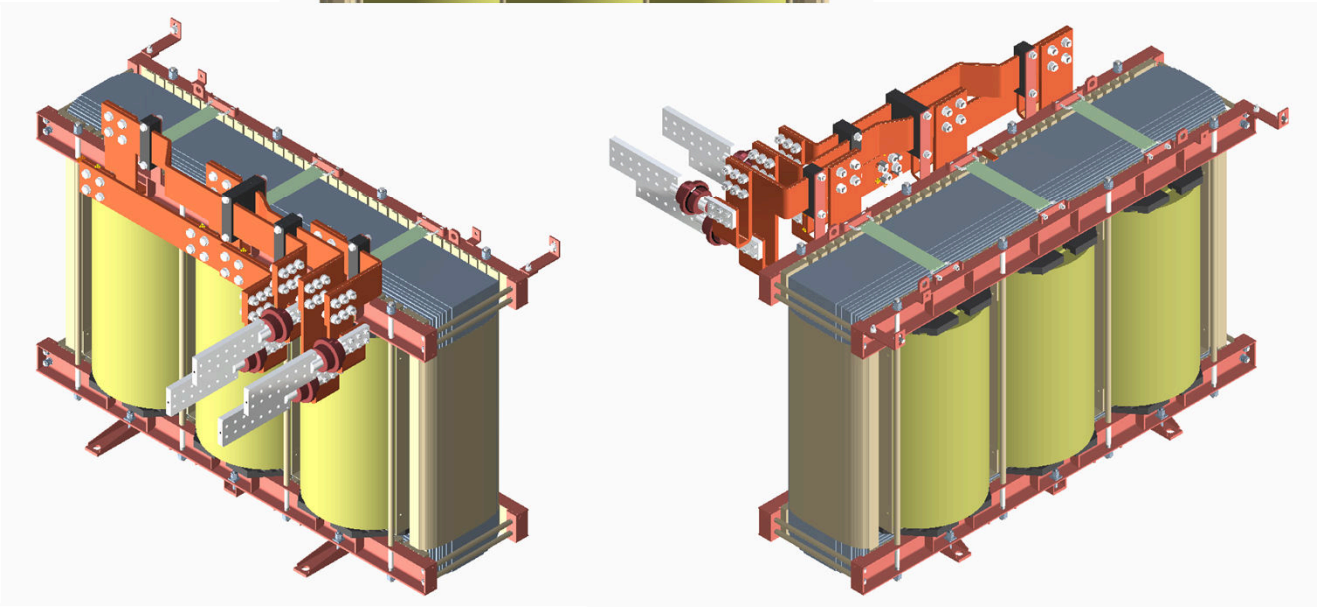






A star-connected L.V. LEAD STRUCTURE





Final Assembly Structure – IEEE Standard

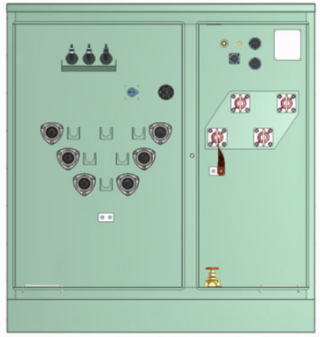
STANDARD: IEEE Standard

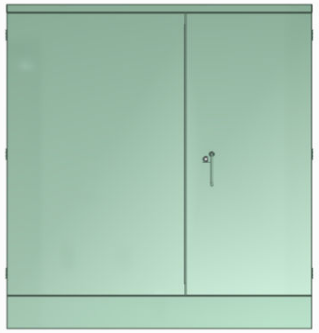
The Feed Type: Loop Feed

H.V. BUSHING: Loadbreak Bushing Insert

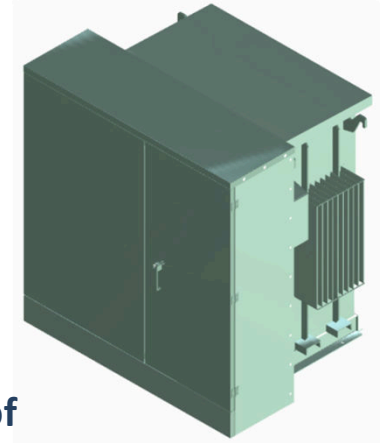
TANK STRUCTURE:

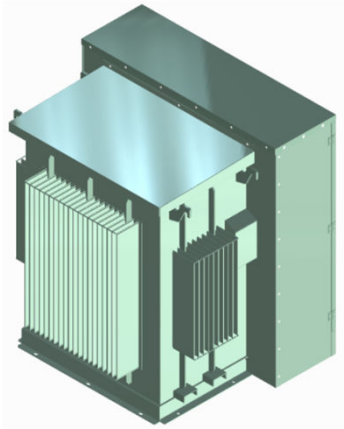
CORRUGATED SHEETS TYPE or RADIATOR TYPE





As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.





As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

Final Assembly Structure – IEEE Standard

STANDARD: IEEE Standard

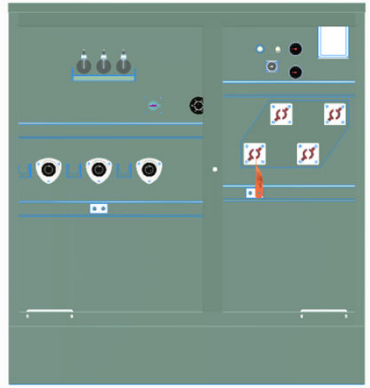
The Feed Type: Radial Feed

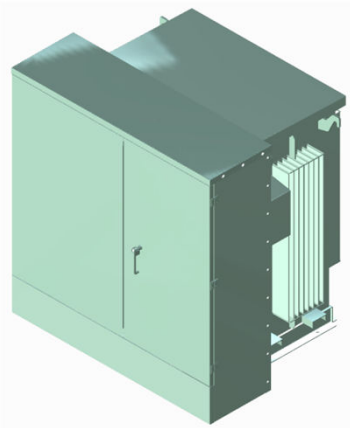
H.V. BUSHING: Loadbreak Bushing Insert

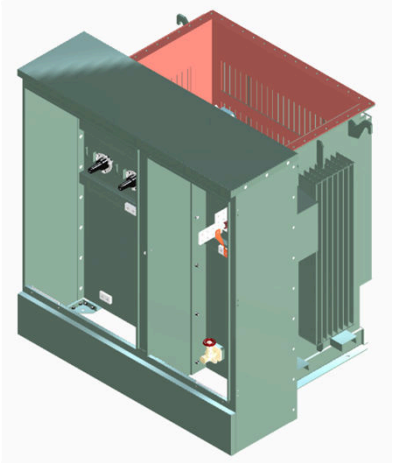
TANK STRUCTURE:

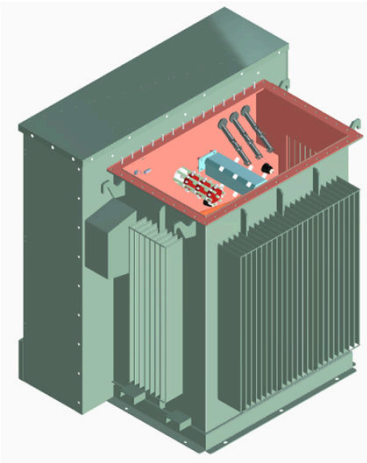
CORRUGATED SHEETS TYPE or RADIATOR TYPE

As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.









Final Assembly Structure – IEEE Standard

STANDARD: IEEE Standard

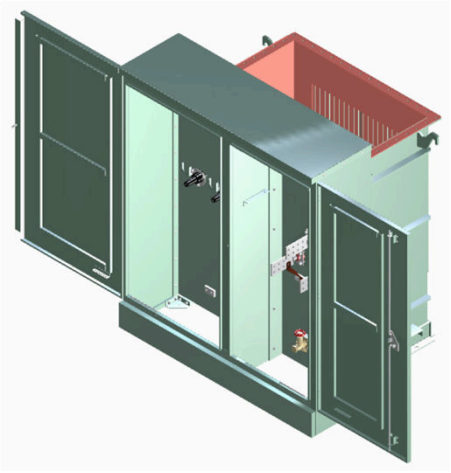
The Feed Type: Radial Feed

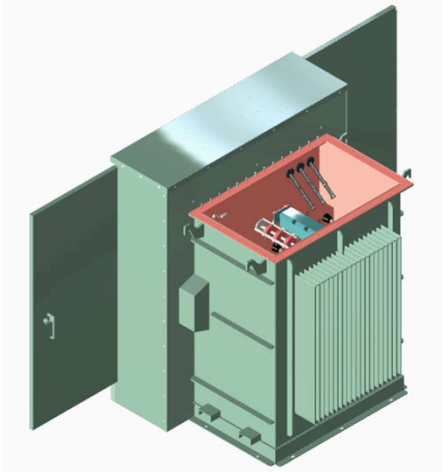
H.V. BUSHING: Loadbreak Bushing Insert

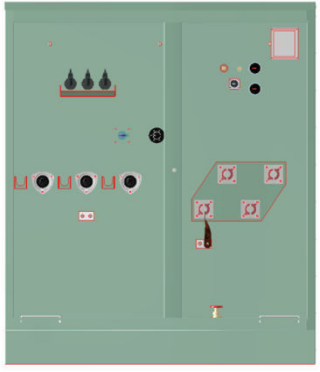
TANK STRUCTURE:

CORRUGATED SHEETS TYPE or RADIATOR TYPE

As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.







Final Assembly Structure – IEEE Standard

STANDARD: IEEE Standard

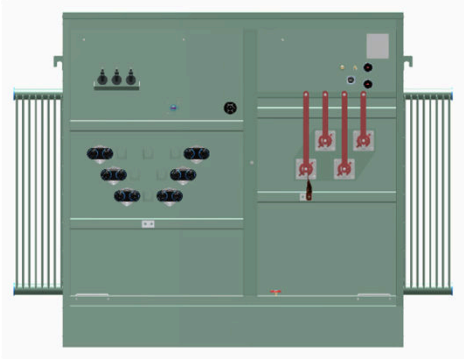
The Feed Type: Loop Feed

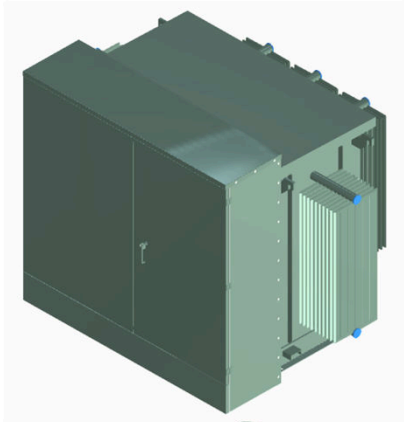
H.V. BUSHING: Dual Loadbreak Bushing Insert

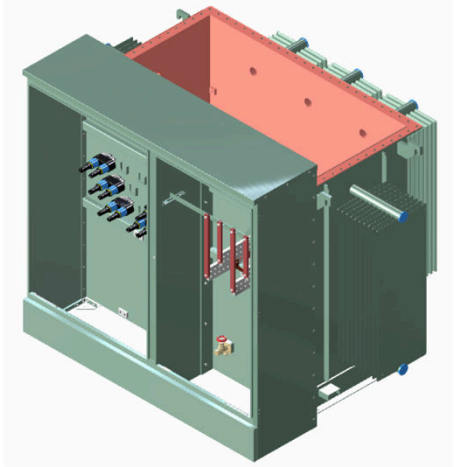
TANK STRUCTURE:

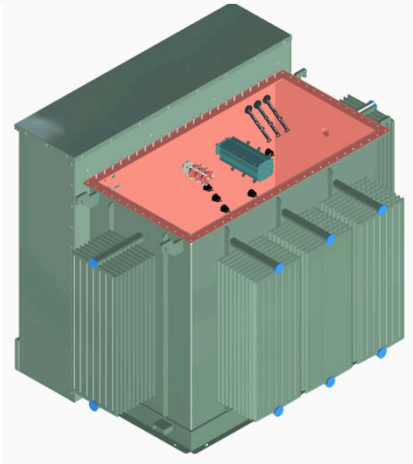
CORRUGATED SHEETS TYPE or RADIATOR TYPE

As the figure shows, the tank in the picture adopts a heat dissipation structure with radiator and welds vertical strengthening ribs on three sides.









Final Assembly Structure – IEEE Standard

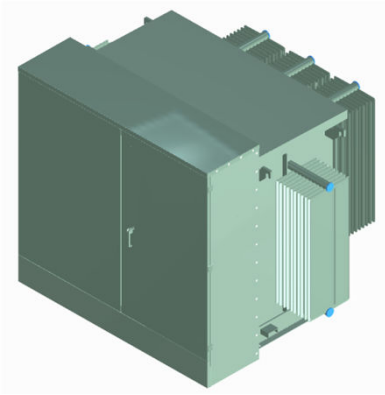
STANDARD: IEEE Standard

The Feed Type: Loop Feed

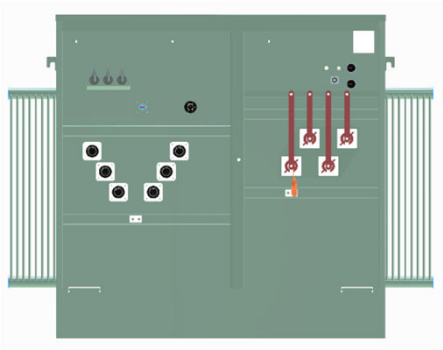
H.V. BUSHING: Deadbreak Apparatus Bushing

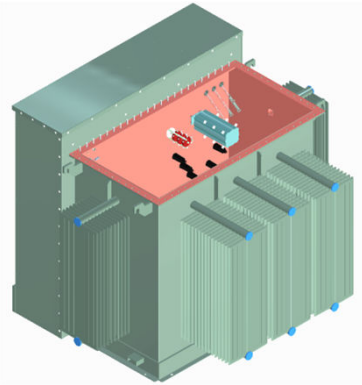
TANK STRUCTURE:

CORRUGATED SHEETS TYPE or RADIATOR TYPE



As the figure shows, the tank in the picture adopts a heat dissipation structure with radiator and welds vertical strengthening ribs on three sides.





Final Assembly Structure – IEEE Standard

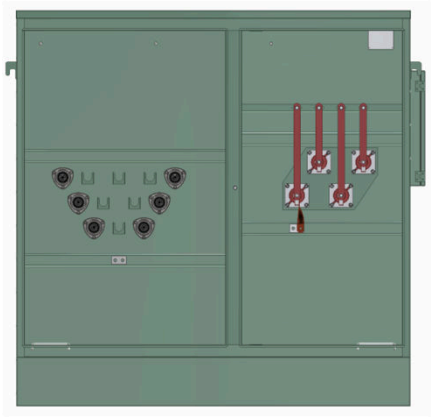
STANDARD: IEEE Standard

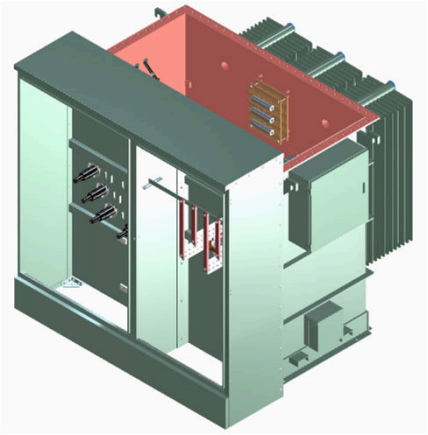
H.V. BUSHING: Loadbreak Bushing Insert

The Feed Type: Loop Feed

TANK STRUCTURE:

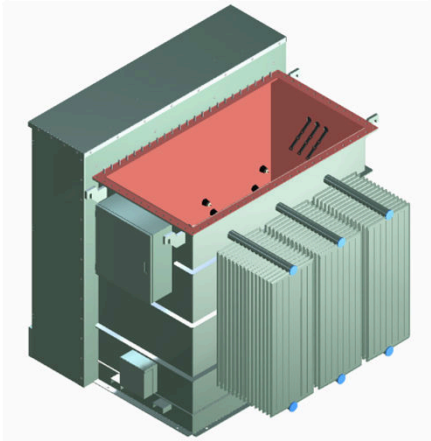
CORRUGATED SHEETS TYPE or RADIATOR TYPE

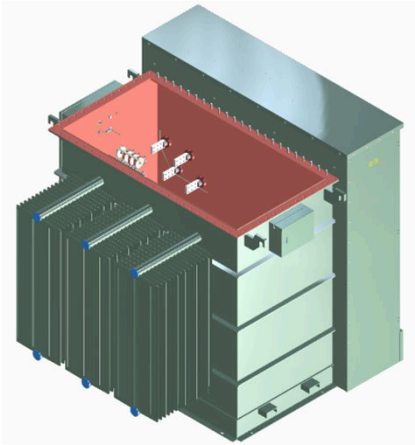




As the figure shows, the tank in the picture adopts a heat dissipation structure with radiator and welds horizontal strengthening ribs on three sides.

A portion of the attachments in the picture are placed on the two sides of Tank, and they are configured boxes.





Final Assembly Structure – IEEE Standard

STANDARD: CSA Standard

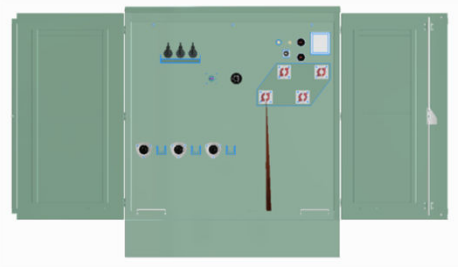
H.V. BUSHING: Loadbreak Bushing Insert

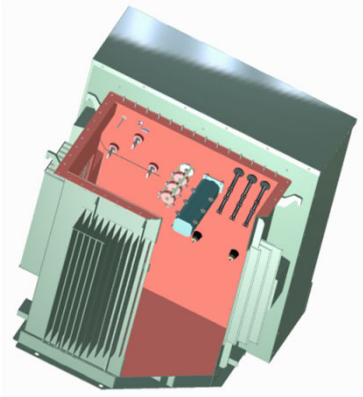
The Feed Type: Radial Feed

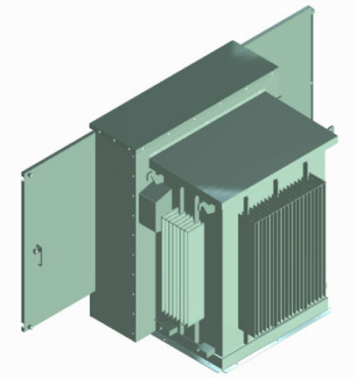
TANK STRUCTURE:

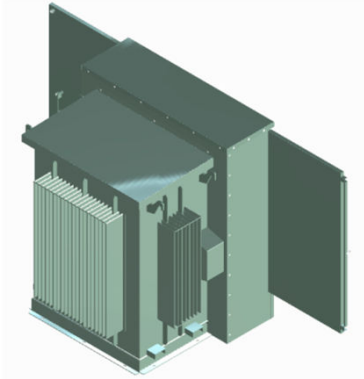
CORRUGATED SHEETS TYPE or RADIATOR TYPE

As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.









Final Assembly Structure – IEEE Standard

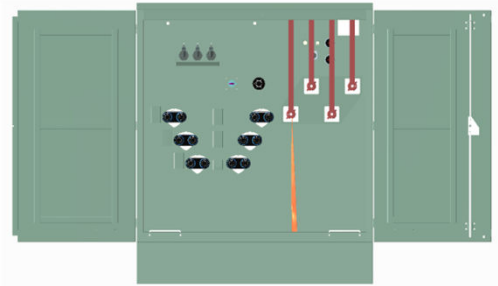
STANDARD: CSA Standard

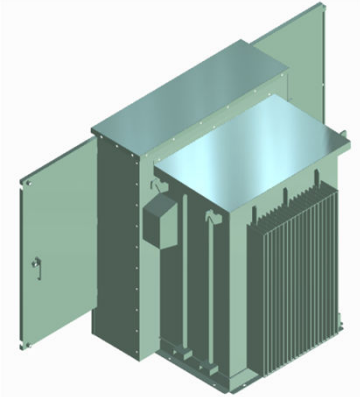
H.V. BUSHING: Dual Loadbreak Bushing Insert

The Feed Type: Loop Feed

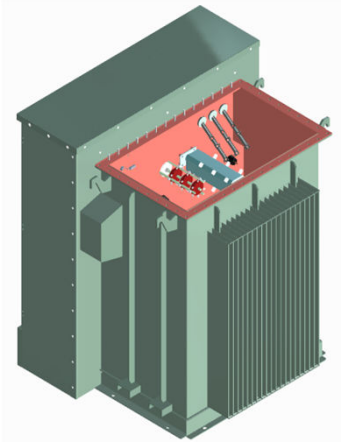
TANK STRUCTURE:

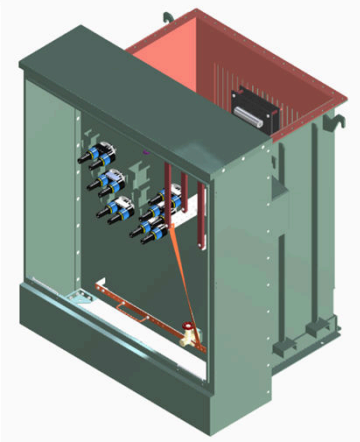
CORRUGATED SHEETS TYPE or RADIATOR TYPE





As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.





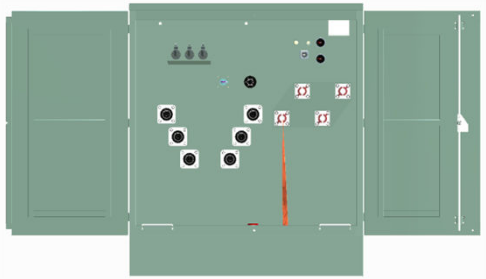
Final Assembly Structure – IEEE Standard

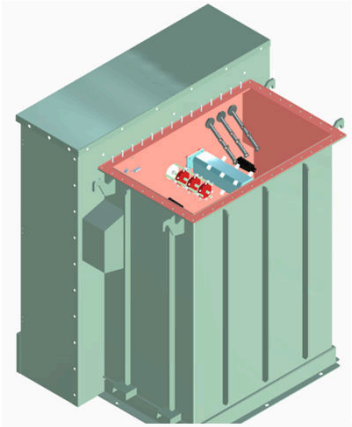
STANDARD: CSA Standard

H.V. BUSHING: Deadbreak Apparatus Bushing

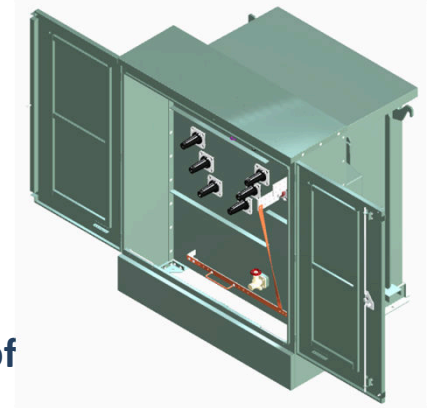
The Feed Type: Loop Feed

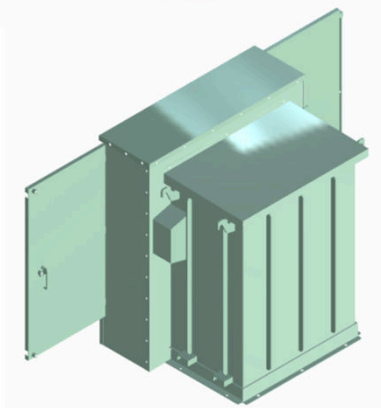
TANK STRUCTURE: NO





As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.





As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

Final Assembly Structure – IEEE Standard

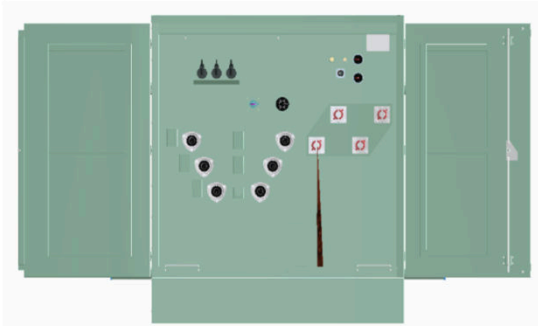
STANDARD: CSA Standard

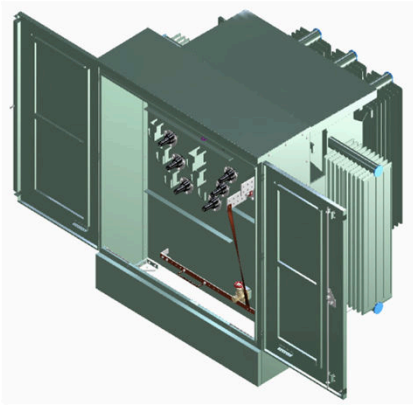
H.V. BUSHING: Loadbreak Bushing Insert

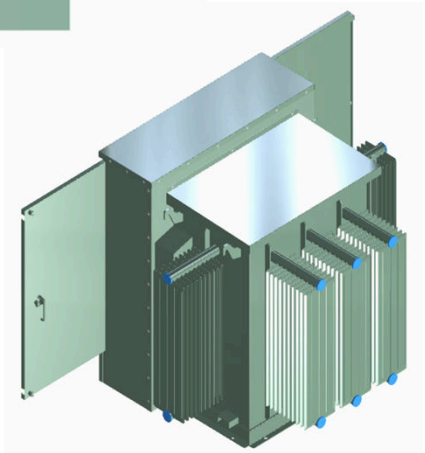
The Feed Type: Loop Feed

TANK STRUCTURE:

CORRUGATED SHEETS TYPE or RADIATOR TYPE







As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds vertical strengthening ribs on three sides.

As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

Final Assembly Structure – IEEE Standard

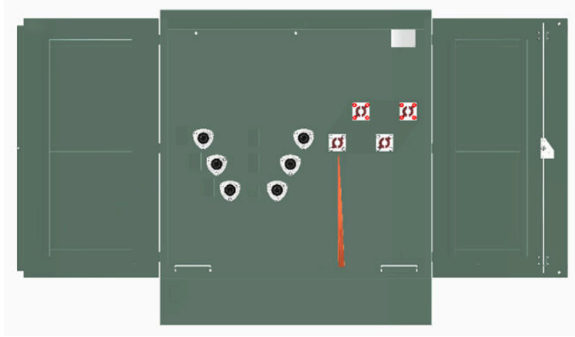
STANDARD: CSA Standard

H.V. BUSHING: Loadbreak Bushing Insert

The Feed Type: Loop Feed

TANK STRUCTURE:

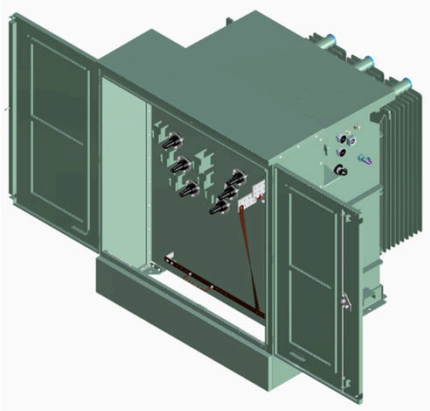
CORRUGATED SHEETS TYPE or **RADIATOR TYPE**

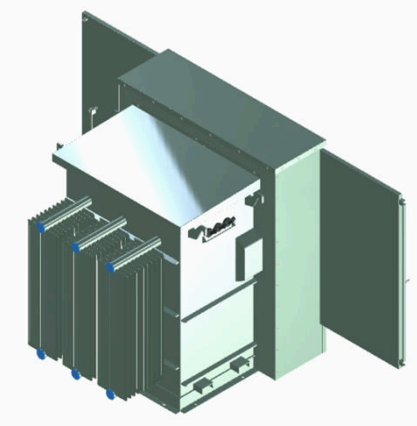


As the figure shows, the tank in the picture adopts a heat dissipation structure with corrugated sheets and welds horizontal strengthening ribs on three sides.

As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

A portion of the attachments in the picture are placed on the two sides of Tank.



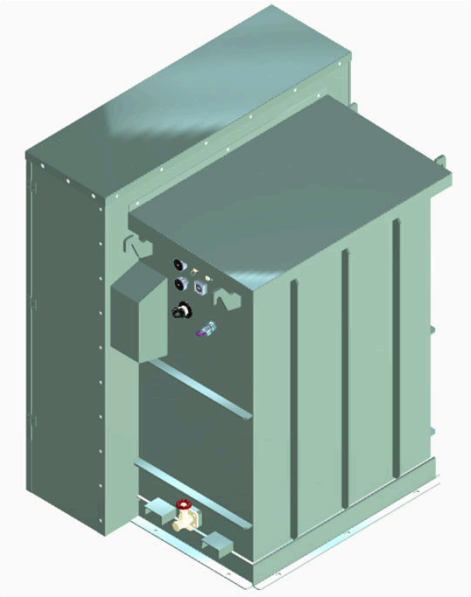


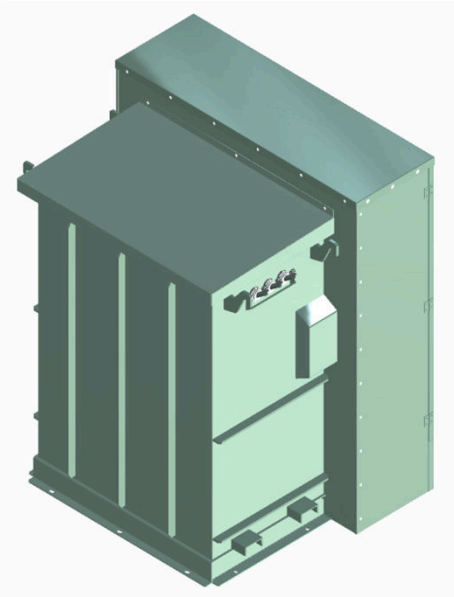
Final Assembly Structure – IEEE Standard

As the figure shows, the tank in the picture do not adopt heat dissipation structure, but it be placed horizontal & vertical strengthening ribs on three sides.

As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

A portion of the attachments in the picture are placed on the two sides of Tank.



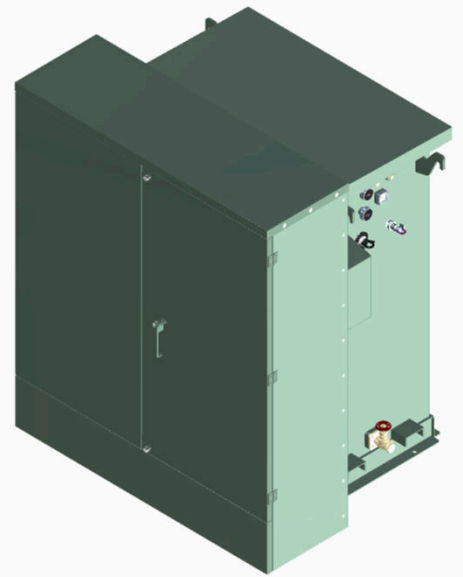


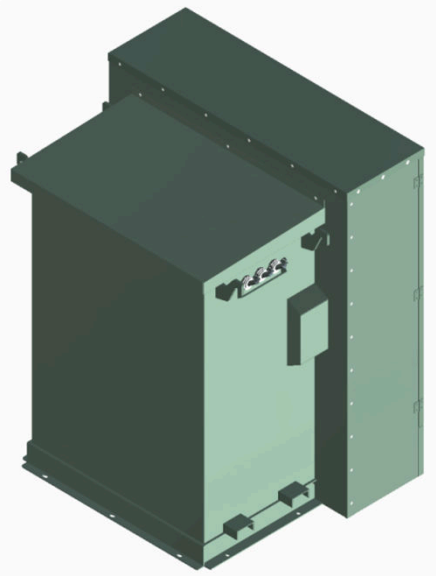
Final Assembly Structure – IEEE Standard

As the figure shows, the tank in the picture do not adopt heat dissipation structure, and it is not be placed horizontal & vertical strengthening ribs on each side too.

As the figure shows, The tank length is too small, so it is placed two bulges on two sides of the tank.

A portion of the attachments in the picture are placed on the two sides of Tank.





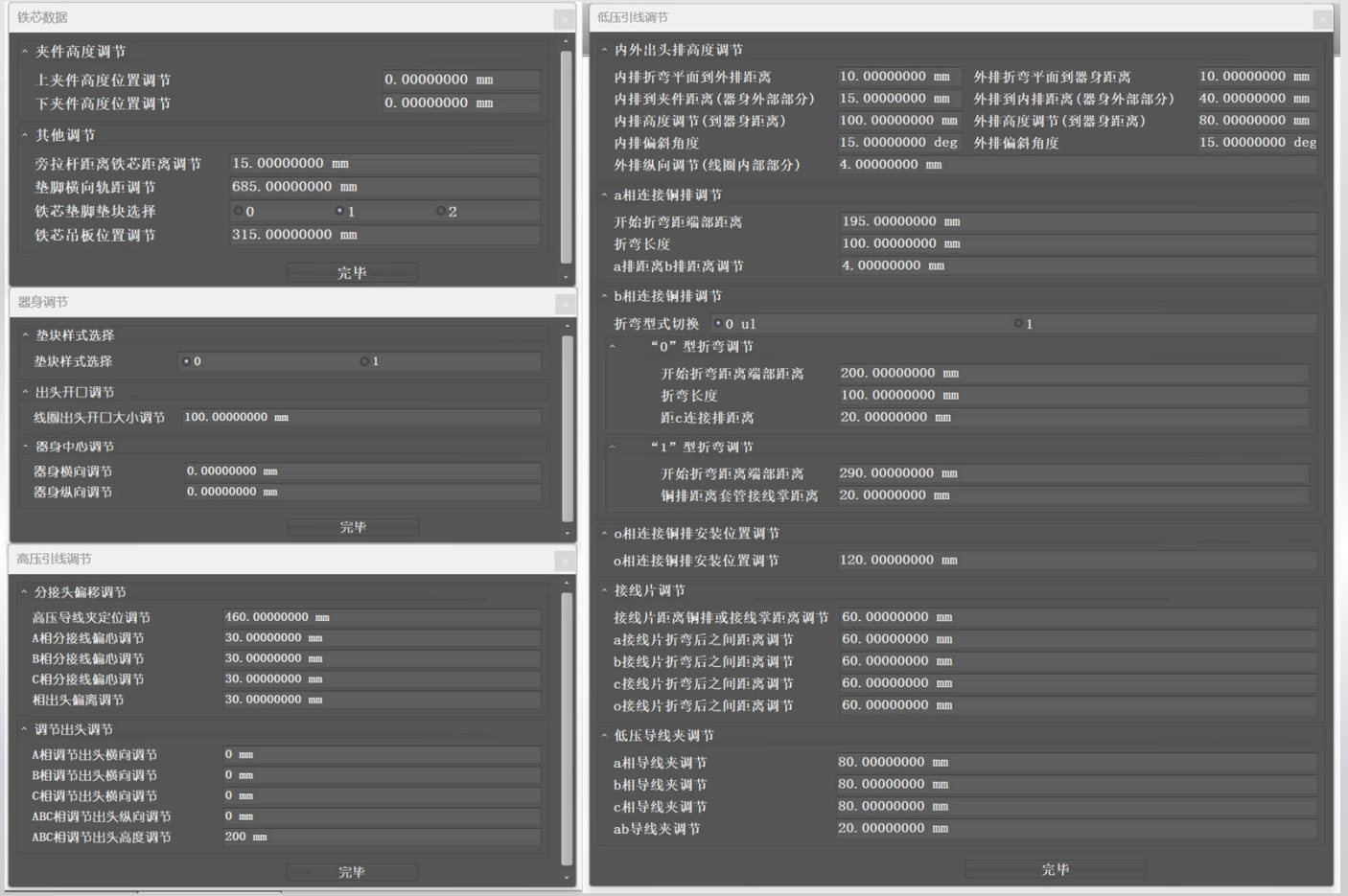
Manual adjustment module

The manual adjustment module cover the commonly used adjustment items in all components of the transformer , as well as the less commonly used but potentially adjustable items. This increases the flexibility and diversity of the items to meet the different needs and special requirements of various customers.

Manually Adjust The Main Directory

Manual adjustment module

Core & Coil Clamping & Lead Bars Adjustment Module



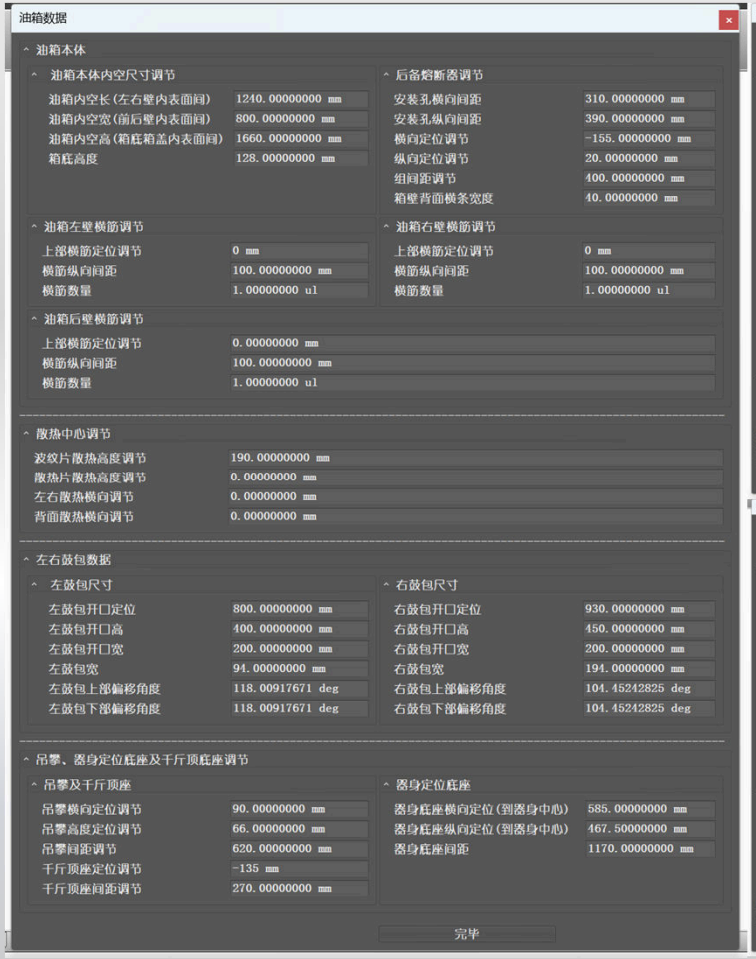
Manual adjustment module

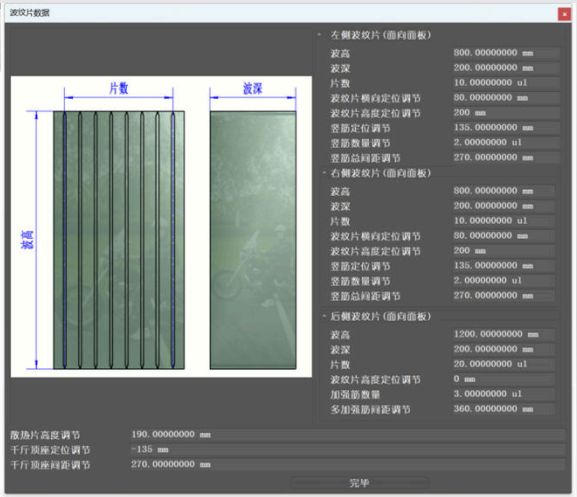
Tank Data &

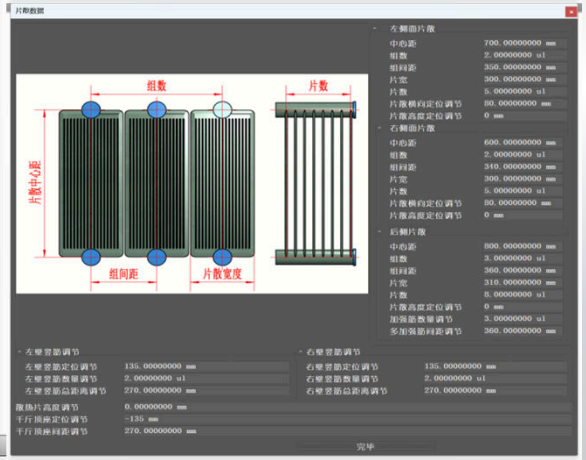
Corrugated Sheets

& Radiators

Adjustment Module

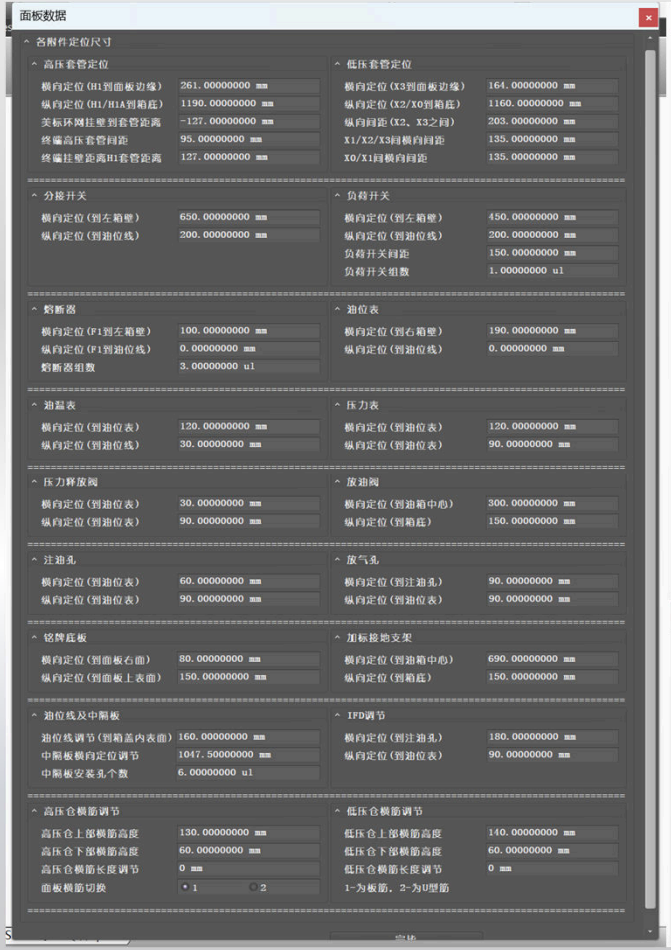






Manual adjustment module

Panel & Corrugated Sheets & Radiators Adjustment Module

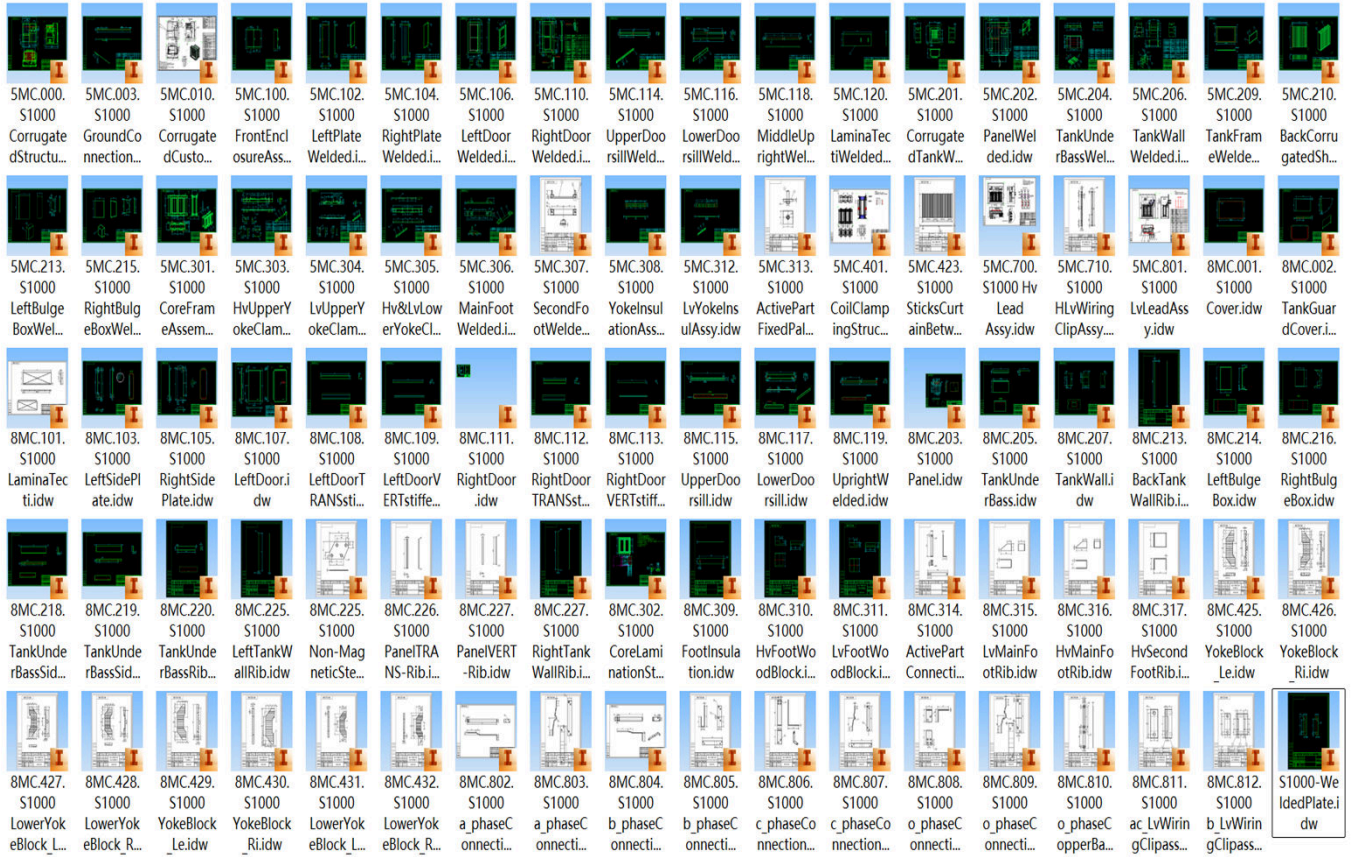


FINAL ASSEMBLY SUMMARY SECTION

ENGINEERING DRAWINGS

As the figure shows

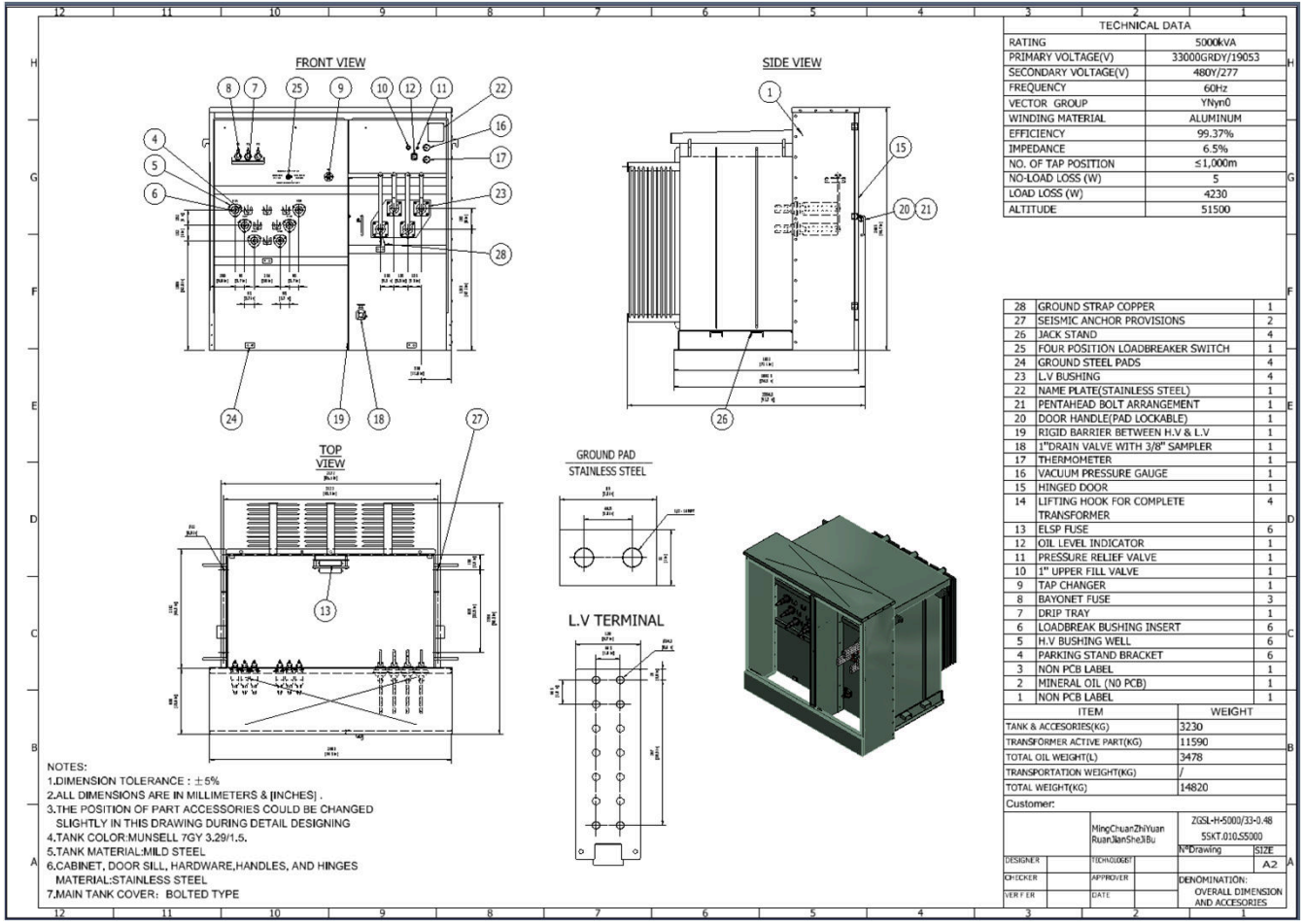
After the project running, all the engineering drawings of the project are collected in the engineering drawing files. The number of engineering drawings ranges from 80 to 100 for different projects.



CUSTOMER REVIEW OF THE DRAWINGS

As the figure shows

After the project running, the customer review of the drawing has been adjusted and organized simply, It can then be sent to the customer for review after about 20 minutes.



SUMMARY

- The transformer structure shown in the above pictures is just one part of the numerous structures.
- Each side of the tank wall can be independently selected whether to install reinforcing ribs. The reinforcing ribs can be arranged horizontally, vertically, or not at all.
- The panel can choose whether to weld reinforcing ribs. It can be plate strengthening ribs , U-shaped strengthening ribs or not at all.
- Except for the four-piece set of accessories for the American transformer, all other accessories can be optionally installed. All the accessories can also be chosen to be placed on the panel, or on the left and right side walls of the tank.
- According to the data and options filled in by the user ,The entire structure will automatically generate a 3D model and engineering drawings. The process takes approximately 20 to 30 minutes, depending on the computer configuration.
- The generated project allows each component to be flexibly adjusted according to actual circumstances. The adjustment can be completed simply by inputting the adjustment distance or changing the options. There is no need to manually modify the 3D model.


T H A N K Y O U
Thank you for your reading.