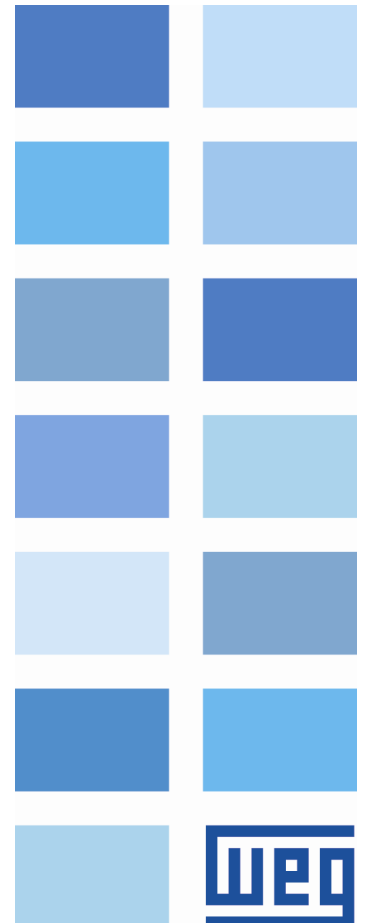
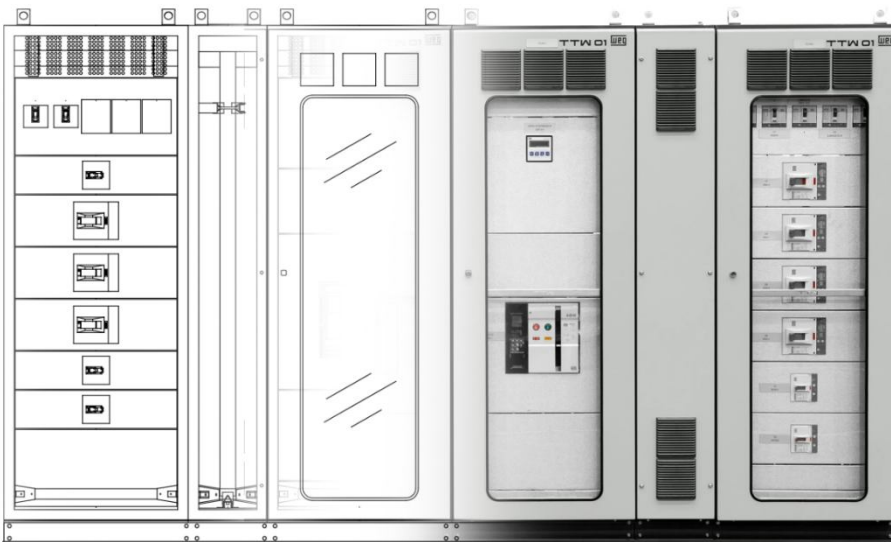


TTW Configurator

WEG Type Tested Assembly Configurator Operation Manual





WEG Type Tested Assembly Configurator Operation Manual

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1 INSTRUCTIONS

For the complete understanding of the operating procedures contained in this manual, it is recommended that the user who will operate the Panel Configuration system have technical knowledge of the product for which this configuration system is intended.

1.1 Access Permissions

The Configurator has an access restriction system; therefore, to access the page of the Configurator, the user must have a user login and password previously registered.

	<p>NOTE! To request access, contact WEG's sales team.</p>
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1.2 Minimum Requirements

The Product Configurator is a WEB tool, so in order to access it, the user must have a device with internet access.

2 ACCESSING THE CONFIGURATOR

To access the Configurator, the user must log in to WEG website, using credentials that allow him to access the system.

2.1 Accessing the TTW Configurator

After logging in to the WEG Website, access the TTW page.
PRODUCTS > Electrical Panels> TYPE TESTED ASSEMBLY.

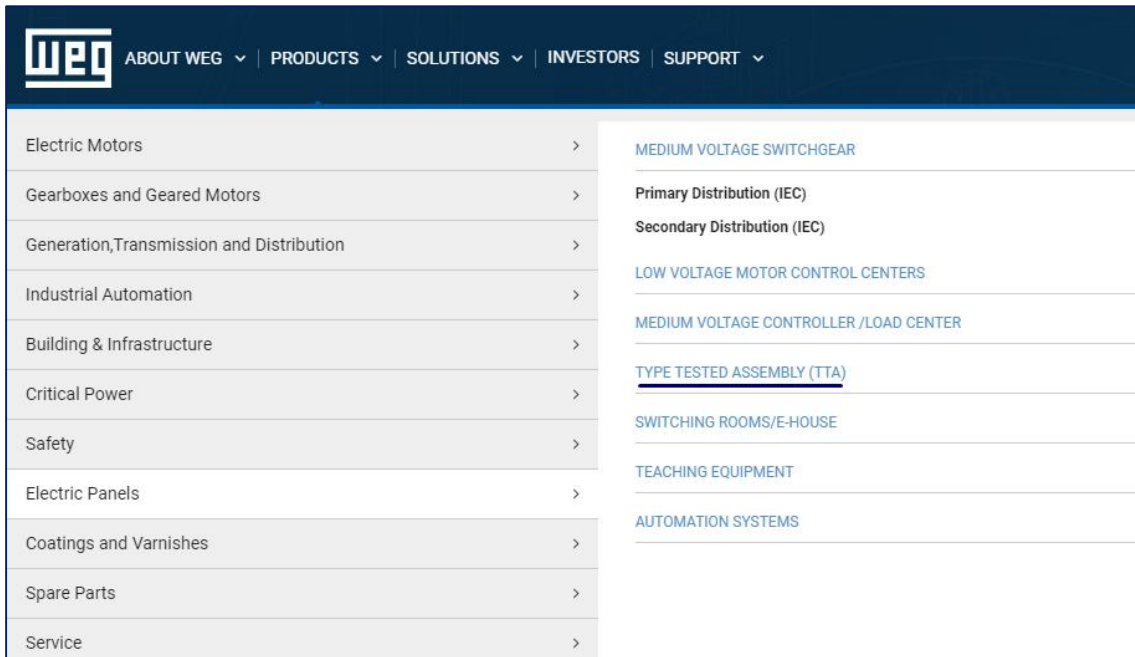


Figure 1 – WEG Website.

The page of Type Tested Assembly has two product options. When accessing them, the user will have access to the specific configurator software of each application: Panels (TTW01) and Switchboards (TTW01-QD).

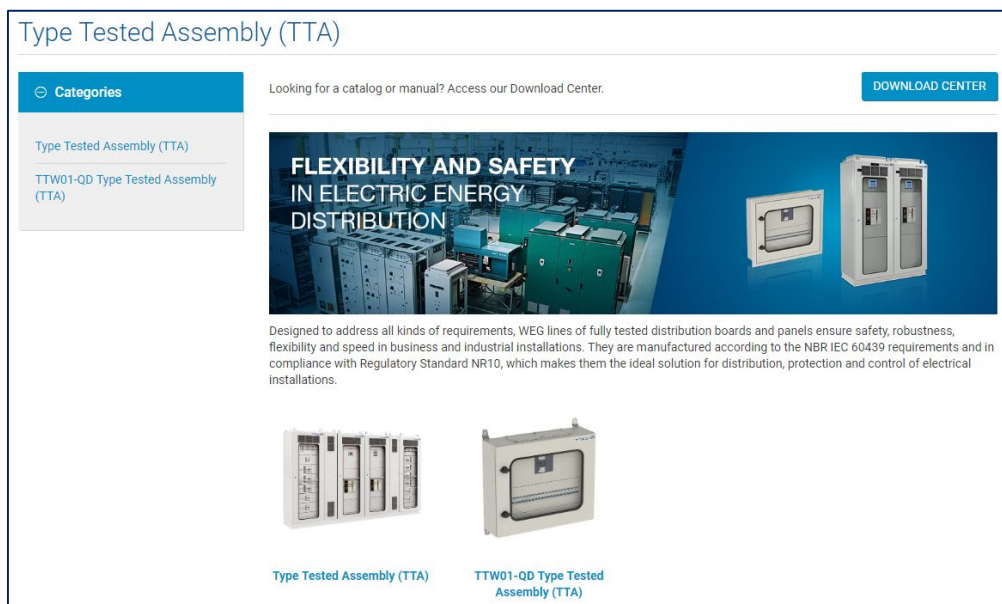





Figure 2 – Type Tested Assemblies.

After choosing the product model to be configured, on the page of the respective model, click the  **Configure** button.

TTW01 - Type-Tested Assembly



The TTW01 - Low voltage modular panels that meets the IEC 60439-1 and IEC 60439-3 standards, with total operational and maintenance security because of their characteristics TTA/PTTA.

Developed to meet the requirements of the switchboards loads of high electrical currents and high levels of short-circuit current, with switchgear equipment and protection that meet the requirements of quality, security and performance.

Their modularity allows future expansions without having to make adjustments during assembly, the modular structure is simple to install and sizing, allowing mounting the panels by integrators duly trained by WEG.

[CONTACT US](#)



 **Configure**

Figure 3 – Configurator Access Screen.

2.2 Panels Configuring

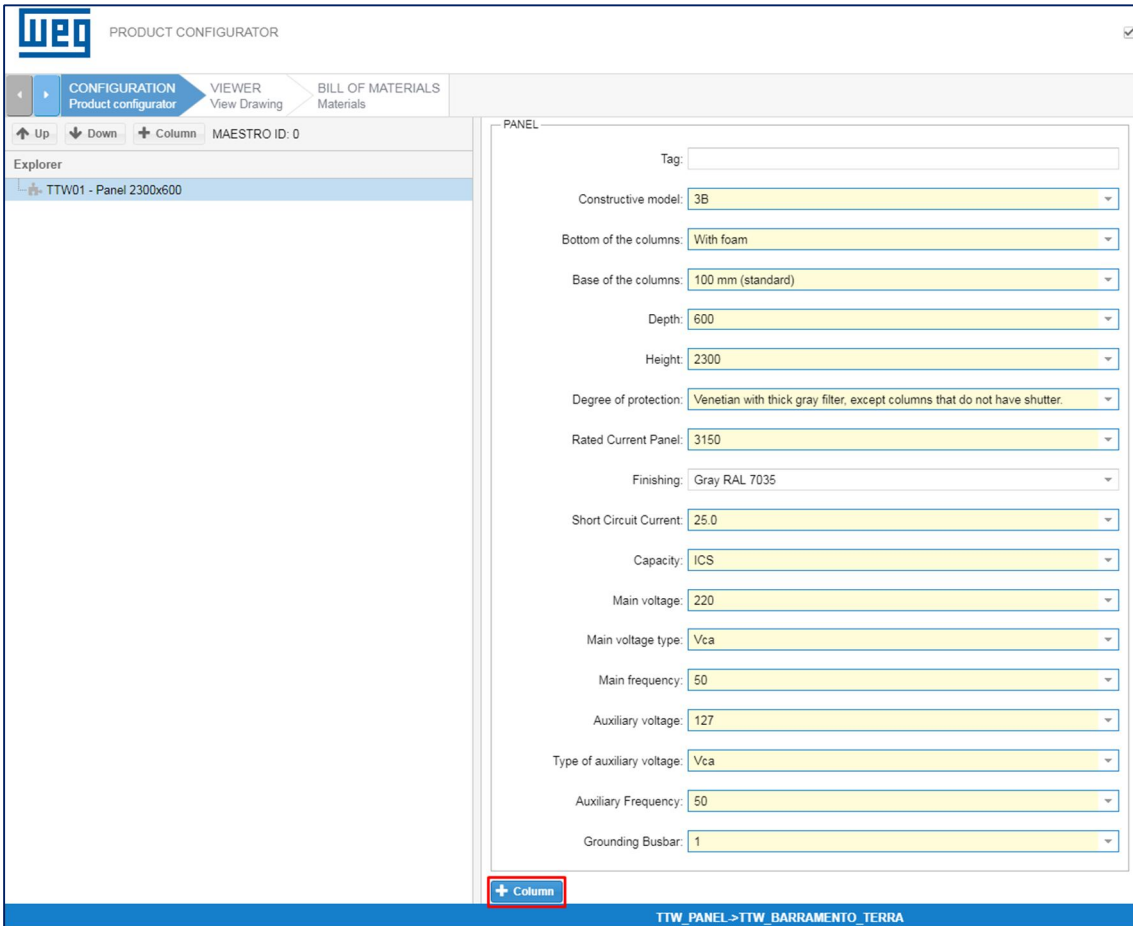
2.2.1 General Settings of the Project

On the initial screen, you define the panel general Settings.
The fields are gradually activated, it means, when you select the value of a panel characteristic, the next field is activated.

	<p>NOTE! All activated fields are mandatory except for the "Tag" fields, which are free text fields intended to help the user identify the pieces and parts of the panel.</p>
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After filling in all the characteristics related to the panel, the button used to add Columns to the project will be active.

Clicking the **+ Column** button locks the general characteristics and takes the user to the Columns Setting screen.



The screenshot shows the WEG Product Configurator interface. The top navigation bar includes 'CONFIGURATION', 'VIEWER', and 'BILL OF MATERIALS'. The 'CONFIGURATION' tab is active, showing 'Product configurator' and 'MAESTRO ID: 0'. The 'Explorer' on the left shows 'TTW01 - Panel 2300x600'. The main area displays various settings for the panel, including 'Tag', 'Constructive model', 'Bottom of the columns', 'Base of the columns', 'Depth', 'Height', 'Degree of protection', 'Rated Current Panel', 'Finishing', 'Short Circuit Current', 'Capacity', 'Main voltage', 'Main voltage type', 'Main frequency', 'Auxiliary voltage', 'Type of auxiliary voltage', 'Auxiliary Frequency', and 'Grounding Busbar'. A red box highlights the '+ Column' button at the bottom left of the settings area.

Figure 4 – General Panel Settings.

2.2.2 Column Setting

The Column Setting follows the same template as the panel, and the characteristic fields are gradually activated. After filling in all of them, the user must click **Confirm**.

The screenshot displays the 'Column' configuration window. At the top, there are tabs for 'Column', 'Mechanical Accessories', and 'Busbar Accessories'. Below the tabs are buttons for 'New Kit - Electrical Comp.', 'New mechanical kit', 'Copy', and 'Delete'. The main configuration area includes the following fields:

- Tag:
- Application:
- Type of ceiling:
- Front closure:
- Rear closure:
- Ground Busbar:
- General current: Vertical current:
- General Neutral Current: Vertical neutral current:

A blue 'Confirm' button is located at the bottom left of the configuration area. To the right of the configuration fields is a 3D model of a column. The top of the column is labeled '539.0 W' and the bottom is labeled '0.0 W'. Below the model, the following summary statistics are displayed:

- Current dissipation: 0.0
- Max dissipation: 539.0
- Free space: 1950.0
- Useful height: 1950.0

Figure 5 – Column Setting.

When you confirm the column information, the system will search for the mechanical accessories and busbars for the corresponding column. The accessories can be viewed and changed through the "Mechanical Accessories" and "Busbar Accessories" tabs.

2.2.2.1 Mechanical Accessories and Column Busbars

The accessory tabs show the list of components required for assembling the columns, in addition to a list of optional accessories, whose quantity can be defined for each column individually. All accessories which quantities are locked for editing have already been automatically added to the final bill of materials when the column was confirmed. The accessories which quantity can be changed are kept in the bill of materials while the value indicated in the quantity is greater than "0". If it is changed to "0", it will be automatically deleted.

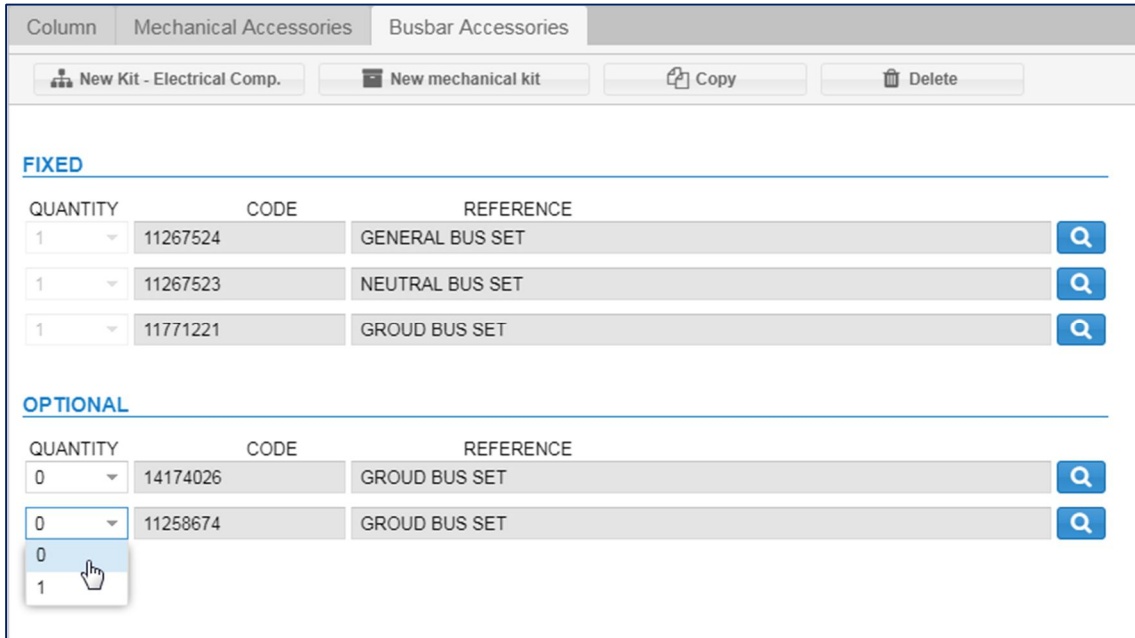


Figure 6 – Column Accessories.

2.2.3 KIT Setting

Kits are subdivided into two groups. The first group includes those associated with electrical components, and the second includes the Mechanical Kits (Mounting Plates, Cover Plates, etc.), to which some models may also have electrical components added. The user must click the insert button of the desired Kit, which will lead to the Kit Setting screen.

Column Mechanical Accessories Busbar Accessories

New Kit - Electrical Comp. New mechanical kit Copy Delete

Column

Tag:

Application: Allocate Mechanical Kits 700mm

Type of ceiling: With flange

Front closure: Display and door with louver

Rear closure: Cover with louver

Ground Busbar: 3F+N Horizontal

General current: 3150 Vertical current: 0

General Neutral Current: 1000 Vertical neutral current: 0

Confirm

539.0 W

0.0 W

Current dissipation: 0.0
Max dissipation: 539.0

Free space: 1950.0
Useful height: 1950.0

Figure 7 – Buttons to Insert Kits.

2.2.3.1 Electrical Component KITs


These Kit models are configured based on information about the Electrical Components that will be used.

After selecting the Family and the Model of the component to be used in the Kit, the system will show a list with all kits available and the user shall select one.

The user can check the drawing of the kits. When you click the view button (🔍), the system will open a new window with the respective drawing.

Selected	Material	Description	Vi...
<input checked="" type="checkbox"/>	11351482	SET MIR+SUPT H1300 ABW3200F 1V	🔍
<input type="checkbox"/>	12079451	SET MIR+SUPT H1300 ABW3200F 1V TIE	🔍
<input type="checkbox"/>	12075107	SET MIR+SUPT H1300 ABW3200E 1V TIE	🔍
<input type="checkbox"/>	11264838	SET MIR+SUPT H1300 ABW3200E 1V	🔍
<input type="checkbox"/>	11353869	SET MIR+SUPT H1200 ABW1600F 1V	🔍
<input type="checkbox"/>	12077521	SET MIR+SUPT H1200 ABW1600E 1V TIE	🔍
<input type="checkbox"/>	11346083	SET MIR+SUPT H1200 ABW1600E 1V	🔍
<input type="checkbox"/>	12081594	SET MIR+SUPT H1200 ABW1600F 1V TIE	🔍

Figure 8 – Choosing a Kit per Electric Component.



NOTE!
Some Kits have been developed for simultaneous use of electrical components of different families (switch disconnectors and circuit breakers, for example), so it is possible to select multiple families and component models.

After selecting the Kit, the user must proceed to the accessory selection step.

Figure 9 – Kit Setting Steps.

For some kits, it is possible to select the busbars connection side, although for most types the connection is free. With the connection side selected, all mechanical accessories and busbars associated with the relevant kit will be displayed.

Some polycarbonate protections can be changed to sheet metal parts by simply selecting the option "Sheet metal".

Connection side:
RIGHT

FIXED MECHANICAL ACCESSORIES

QUANTITY	CODE	REFERENCE
1	13444461	SET PROT 3B ABW3200F 0x700x0
1	11331809	SET POLYCARBONATE PROT H400 0x0x600

MECHANICAL ACCESSORIES VARIABLE

QUANTITY	CODE	REFERENCE	CHANGE
3	13575700	SET PLATE PROT H450 0x0x600	<input checked="" type="checkbox"/> Sheet Metal
1	11331809	SET POLYCARBONATE PROT H400 0x0x600	<input type="checkbox"/> Sheet Metal

BUSBAR AND CABLES ACCESSORIES

QUANTITY	CODE	REFERENCE
1	11351655	SET BUS CLIENT COM ABW2000F 0x700x600
3	11340839	SET BUS INTERC ABW2000E 0x300x0
1	11351907	SET BUS INTERC RIGHT ABW2000F 0x700x600

Figure 10 – Kits Accessories.

On the next tab "Electrical Components", you select the components that will be used in the kit. After filling in the "Family" and "Model" fields, two lists will be displayed.

	<p>NOTE! For Open Circuit Breakers, you will also need to fill in the "Execution" field.</p>
--	---

The bottom list is limited by the components available for use in the chosen Kit. By clicking the **+** button or changing the quantity of a component, it will be automatically transferred to the top list. By clicking the view button (🔍) it is possible to see the technical data of the components.

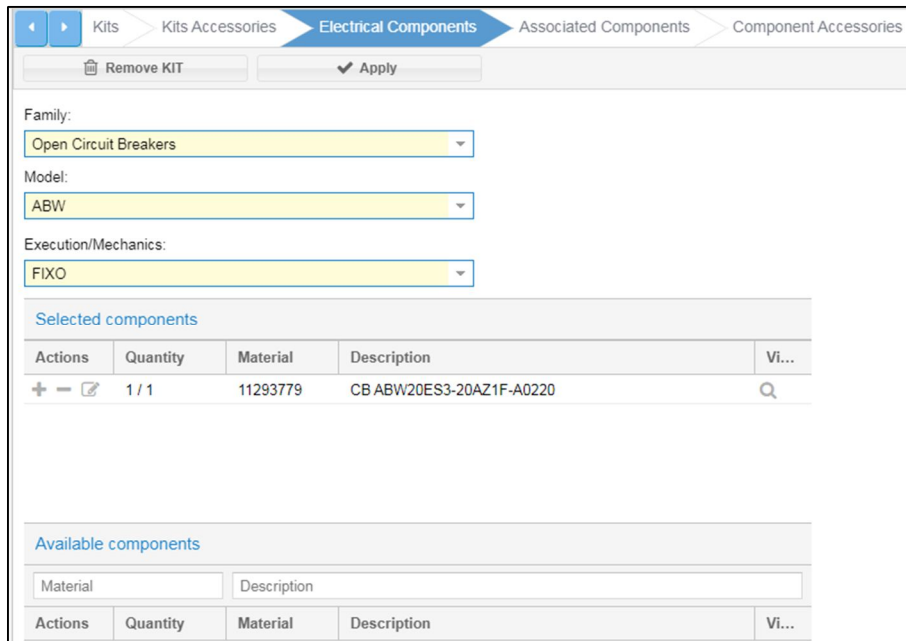


Figure 11 – Selection of Electrical Components.

In the "Associated Components" tab you can select the secondary components that can be associated with the main electrical components. You can, for example, select Fuses for use with a switch disconnecter. The method to select the associated components is the same as for selecting the main electrical components.

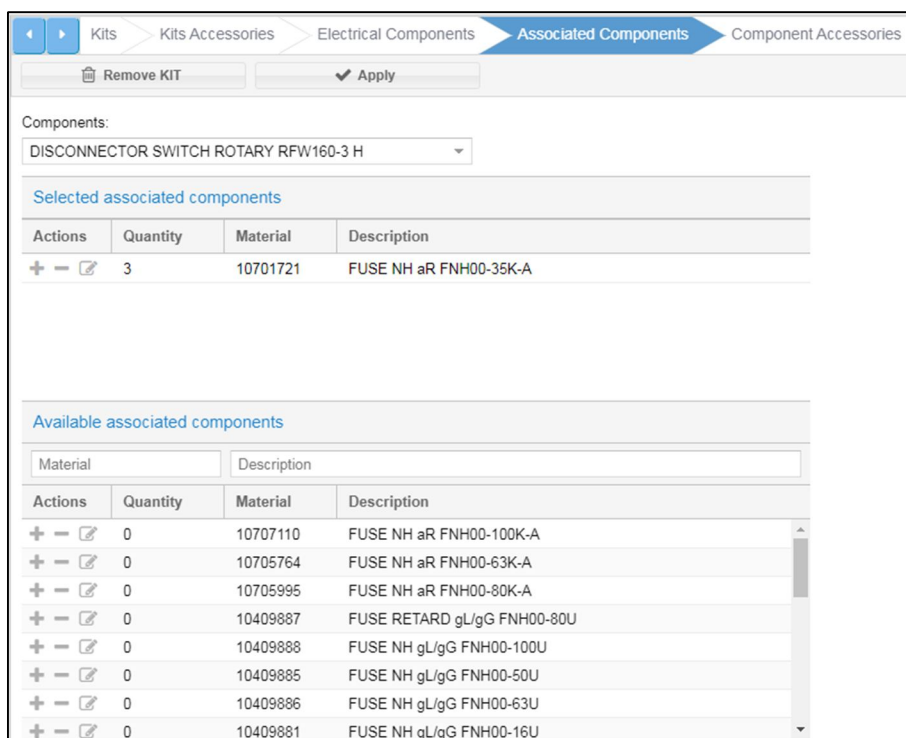


Figure 12 – Selection of Associated Components.

The last tab "Component Accessories" allows selecting accessories for the selected electrical components. You can select accessories for the main components and associated components, and the selection follows the same method as the previous steps.

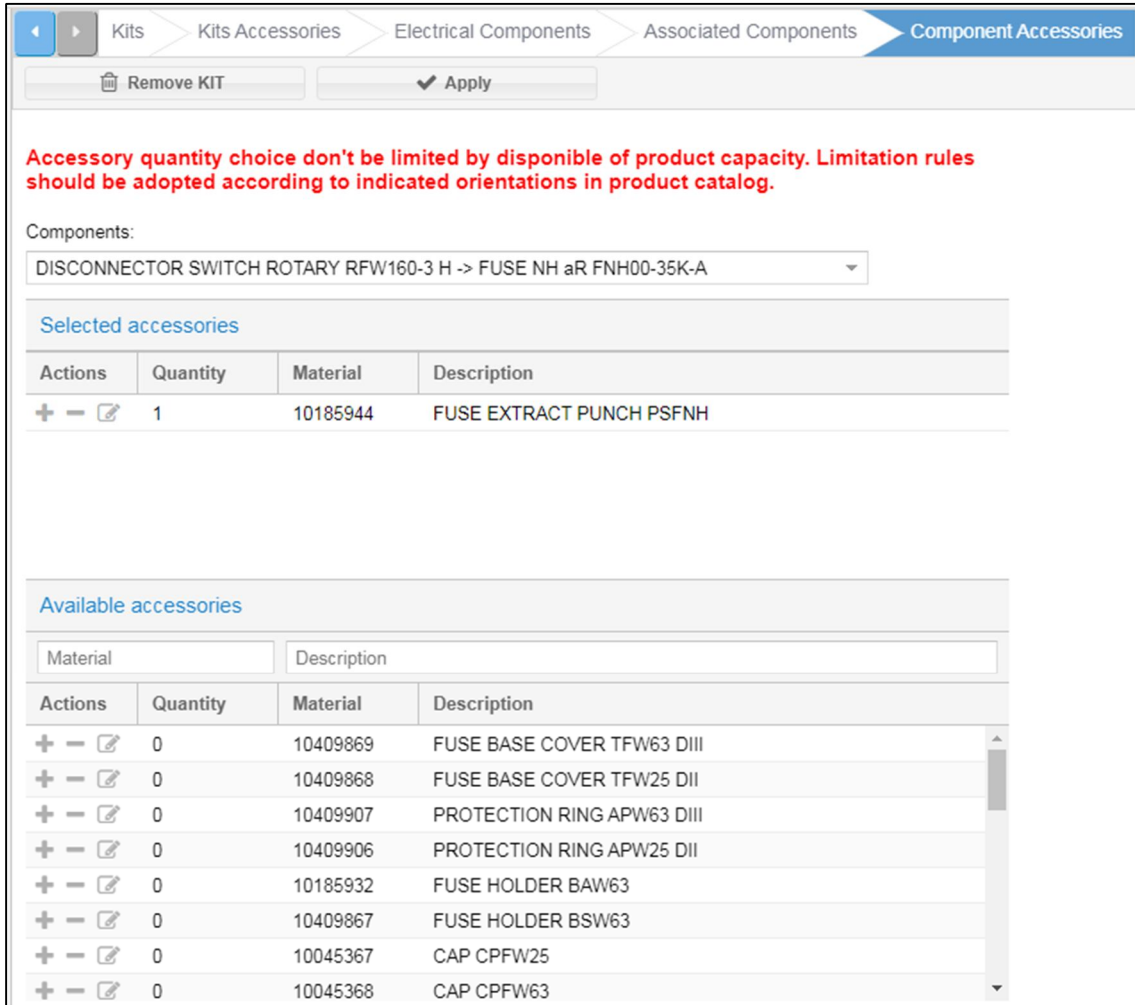
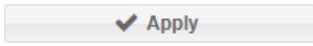


Figure 13 – Selection of Accessories for Components.

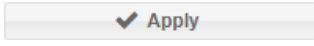
After this step, click the  button and the Kit will be completed.

2.2.3.2 Mechanical Kits

The Mechanical Kit Setting begins by selecting the Kit family; based on this information, all available kits will be listed.

For Mechanical Kits containing a mounting plate, it is possible to select some electrical components for use in the Kit. However, there is no standard validation when use of the components in the respective Kit.

When selecting electrical components, you can also choose accessories for the selected components.

After completing the Kit and Component selection, click the  button and the kit will be added to the panel.

2.2.3.3 Available Space and Thermal Dissipation

On the right side of the column Setting screen there is an illustrative drawing, which shows the free space for allocation of Kits (white area) and the space already used (dark area). This drawing is merely illustrative and is only displayed to present the space usage of the column.

When selecting Mechanical Kits or electrical components, the system automatically displays only the models which fits for use in the free space within the column.

Next to the column drawing is a bar graph that indicates the panel thermal dissipation levels. When the thermal dissipation of the components exceeds what is allowed for the column, a few options are displayed at the bottom of the screen to adjust the dissipation levels.

The screenshot displays the 'Column' configuration screen with the following details:

- Configuration Options:**
 - Application: Allocate Mechanical Kits 700mm
 - Type of ceiling: With flange
 - Front closure: Display and door with louver
 - Rear closure: Cover with louver
 - Ground Busbar: 3F+N Horizontal
 - General current: 3150
 - Vertical current: 0
 - General Neutral Current: 1000
 - Vertical neutral current: 0
- Thermal Dissipation Summary:**
 - Current dissipation: 576.4 W
 - Max dissipation: 539.0 W
 - Free space: 1050.0
 - Useful height: 1950.0
- Dissipation Section (highlighted in red):**
 - Modify the configuration of the ports.
 - Add ventilated ceiling mechanical accessory.
 - Apply service factor: 1.0
 - Calculate forced ventilation
 - Calculated ventilation (m³/h):

Figure 14 – Thermal Dissipation Assessment.

The thermal dissipation is recalculated if the door models are changed or also if a ventilated roof is added to the column. A cooling system is added on the "Mechanical Accessories" tab.

In addition to the changes in the column Setting, you can also apply a service factor and / or select the forced ventilation calculation option. In this case, the system will report the necessary flow to adjust the dissipation levels of the column in question.

2.3 Configuring Switchboards

2.3.1 Switchboard Setting

For switchboard projects, there is no general Setting screen, because, for this configurator, each project refers to only one switchboard.

The Switchboard Setting follows the same template as the columns, and the characteristics are gradually activated. After filling in all the characteristics, the user must click .

Box Mechanical accessories

Box

Tag:

Color: MT Gray RAL 7035

Nominal current: 250

Short-circuit current: 10

Instalation: Embedding

Permissible temperature: 40

Height: 800

Width: 600

Depth: 150

Mirrors

Total height: 750.0
Free space: 750.0

Kits

Total height: 750.0
Clear height: 750.0

Current dissipation: 0.0
Max dissipation: 100.0

100.0 W

0.0 W

Figure 15 – Switchboard Setting.

When you confirm the information, the system will search for the accessories for the current switchboard. The accessories can be viewed and changed through the "Mechanical accessories" tab.

2.3.1.1 Mechanical Accessories for Switchboards


The accessories tab lists some optional components that can be used with the selected switchboard. When the amount of these components is changed to a value other than "0", the accessory is automatically added to the bill of materials.


2.3.2 KIT Setting

The Kits are subdivided into two groups. In the first group are those directly related to electrical components, and in the second are the Mechanical Kits, to which some models can also have electrical components added.

The user must click the insert button of the desired Kit type, which will lead to the Setting screen. For switchboard designs, the space available for component allocation is divided into "space for allocation of kits" and "space for allocation of cover plates". Thus, after selecting a busbar kit, the user can then configure a blank cover plate kit to be placed in front of the bars.

Figure 16 – Kit options and available space.

	<p>NOTE! The kit Setting for switchboards follows the same principles applied to columns. For further explanation, see the steps 2.2.3.1 and 2.2.3.2 of this manual.</p>
---	---

	<p>NOTE! The space available / used by cover plates is calculated by the system; however, their position is defined by the assembler.</p>
---	--

2.4 Viewing the Drawings

The configurator will generate an illustrative drawing of the project, with all the columns / switchboards and the representation of the configured Kits. The drawing is accessed through the "VIEWER" tab.

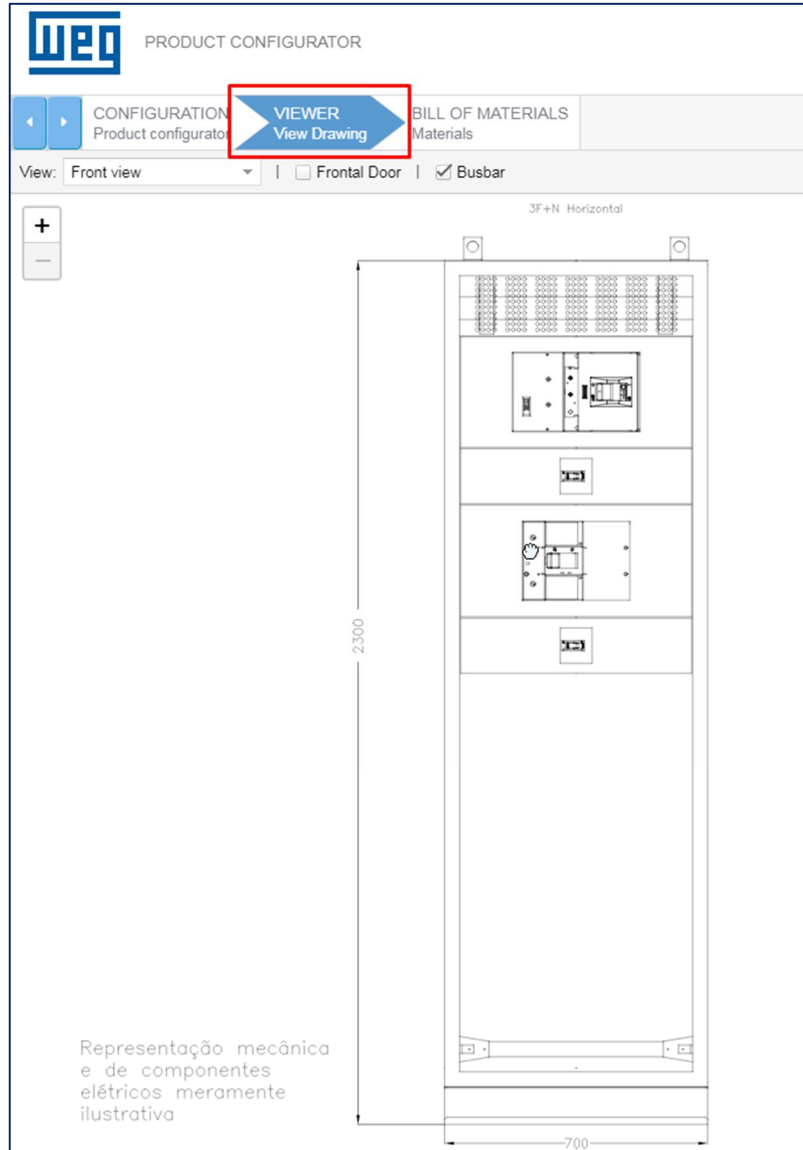


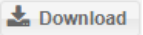
Figure 17 – Drawing Viewer.

The construction of the drawing is dynamic, so when the Setting changes and the viewer is accessed, the drawing will be updated.

You can see the front and back views, and for the front view you can configure the view of the doors and busbars by selecting the desired option.

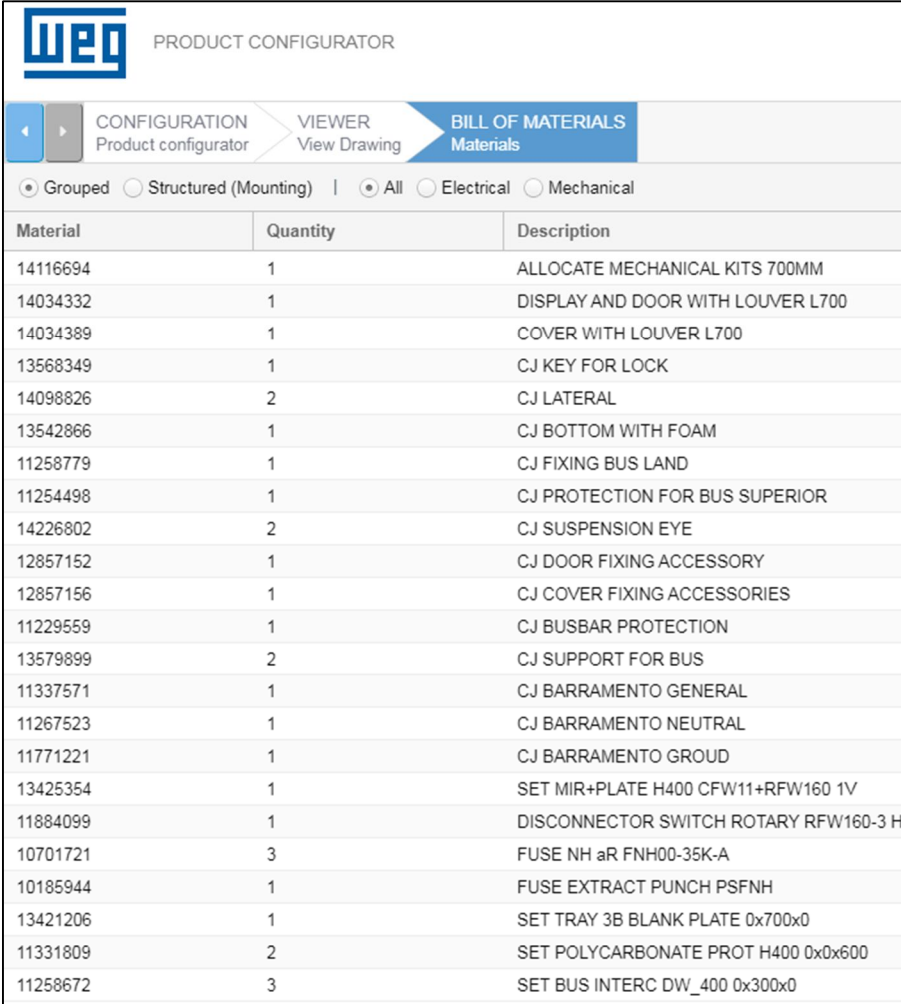


Figure 18 – View Options.

You can download the drawings by clicking the  button, but you must download each view separately (Front View, Back View, etc.). The drawings will be available on the user's computer in DWG format.

2.5 Result – Bill of Materials

The "BILL OF MATERIALS" tab displays the complete list with component codes, descriptions and respective quantities.



Material	Quantity	Description
14116694	1	ALLOCATE MECHANICAL KITS 700MM
14034332	1	DISPLAY AND DOOR WITH LOUVER L700
14034389	1	COVER WITH LOUVER L700
13568349	1	CJ KEY FOR LOCK
14098826	2	CJ LATERAL
13542866	1	CJ BOTTOM WITH FOAM
11258779	1	CJ FIXING BUS LAND
11254498	1	CJ PROTECTION FOR BUS SUPERIOR
14226802	2	CJ SUSPENSION EYE
12857152	1	CJ DOOR FIXING ACCESSORY
12857156	1	CJ COVER FIXING ACCESSORIES
11229559	1	CJ BUSBAR PROTECTION
13579899	2	CJ SUPPORT FOR BUS
11337571	1	CJ BARRAMENTO GENERAL
11267523	1	CJ BARRAMENTO NEUTRAL
11771221	1	CJ BARRAMENTO GROUD
13425354	1	SET MIR+PLATE H400 CFW11+RFW160 1V
11884099	1	DISCONNECTOR SWITCH ROTARY RFW160-3 H
10701721	3	FUSE NH aR FNH00-35K-A
10185944	1	FUSE EXTRACT PUNCH PSFNH
13421206	1	SET TRAY 3B BLANK PLATE 0x700x0
11331809	2	SET POLYCARBONATE PROT H400 0x0x600
11258672	3	SET BUS INTERC DW_400 0x300x0

Figure 19 – Bill of Materials.

The display of the components can be changed, allowing to view the components grouped by code or structured according to the assembly hierarchy. In both cases it is possible to choose between full view of the components or the exclusive view of electrical or mechanical components.

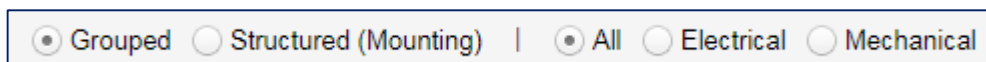
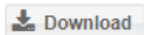




Figure 20 – View Options.



You can download the bill of materials by clicking the  button. An Excel "xls" file with the Will be generated with the same bill of material displayed in the screen.

2.6 Other System Functions

The system has some additional functions that help develop the project; for example, copy columns and kits, move columns, etc.

In the left part of the "SETTINGS" tab is the "Explorer" field; in this place, the project structure is displayed. Above the explorer are the auxiliary buttons.

The  **Up** and  **Down** buttons move the columns and kits within the project structure.

The  **Column** button adds a new column to the project, and the  **Manual** button opens the product manual.

When you click with the mouse reverse button on any Explorer item, some options are displayed. These functions allow you to delete a project kit or column, copy a column, or copy and paste a kit.

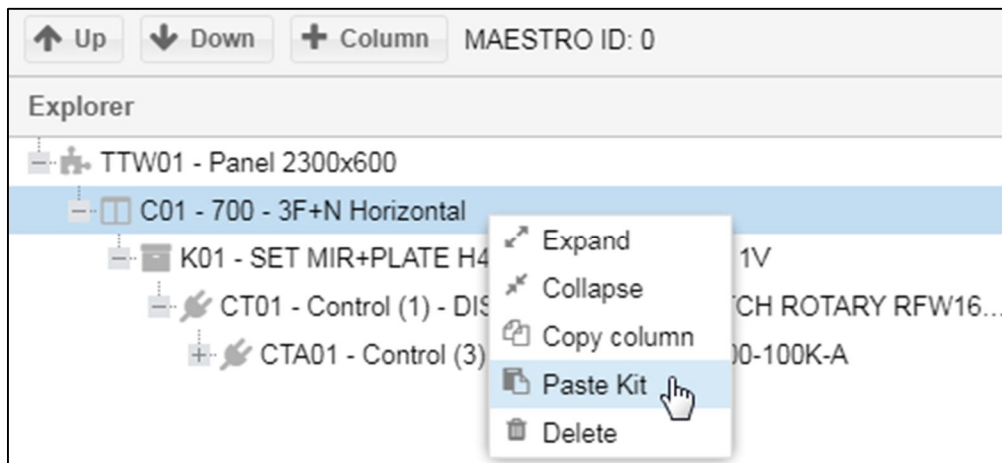





Figure 21 – Project Structure.

2.7 Project Toolbar

The is located in the upper right corner is screen and can be used to save and copy the project or display alert messages to the user.

The  button displays alert messages whenever necessary to indicate to the user some inconsistency; for example, the exceeding of the thermal dissipation.

To save the project, just click the  button. The project will be saved, and the user redirected to WEG website.

When you need to cancel changes made to a project or discard an ongoing project, simply click the  button.

You can copy existing projects by clicking the  button. As a result, the system will generate a copy of the project that was open. All modifications made after clicking the "Copy" button will be applied to the new project.



Figure 22 – Toolbar.



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