

# BOXCAD HANDBOOK

3RD EDITION

SINCE 2005



You don't need CAD software knowledge to customize your electrical enclosures.



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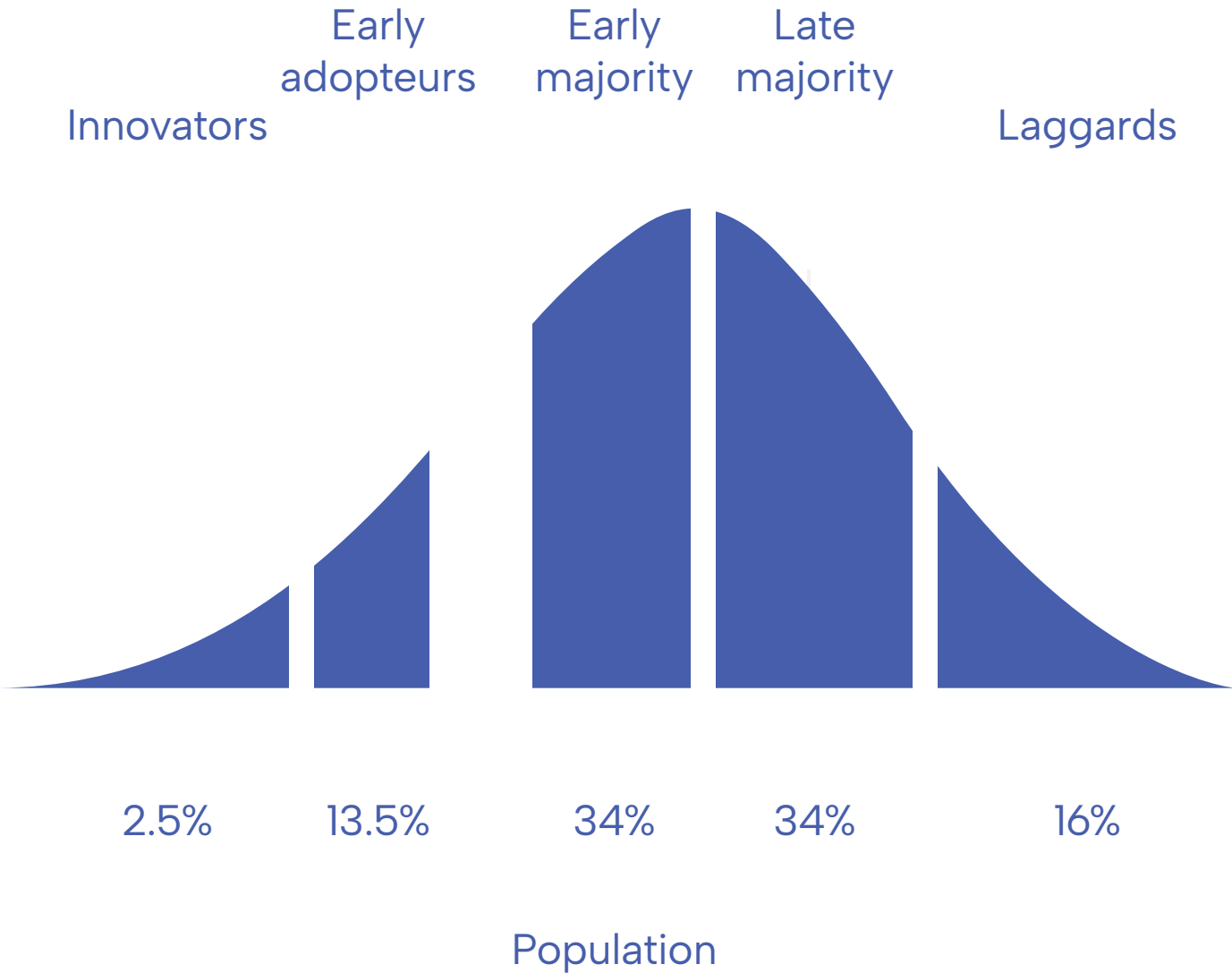


***“INNOVATION DISTINGUISHES  
BETWEEN A LEADER  
AND A FOLLOWER”.***

– Steve Jobs

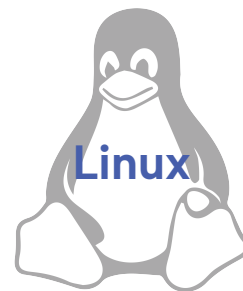
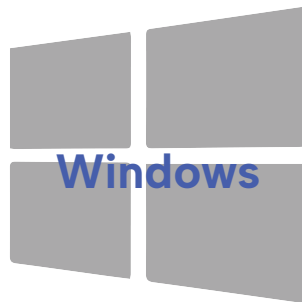
In the life cycle of a new technology, approximately **15%** of leading-edge users will adopt this innovation from its very beginning.

Do you want to be part of the **15%** of innovators or wait and follow the laggards?



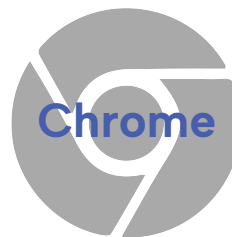
The use of BOXCAD requires Internet access.

The BOXCAD service can be used with a personal computer running on such **operating systems**:



The BOXCAD service is also accessible using a tablet with a recognized internet browser.

**Use an internet browser such as:**



## What is BOXCAD?

BOXCAD was developed and used internally by EXM before it was made available to the public in 2005. It is used to facilitate the design of custom electrical boxes.

Before the BOXCAD era, a box drawn by our customers would have to be drawn a second time according to our manufacturing standards. This process doubled the efforts required. Also, it greatly increases the risk of errors due to misinterpretations.

This is why EXM innovated by offering a user-friendly platform that allows its users to directly configure a custom electrical enclosure, whether or not that person has knowledge of CAD software.

## Why use BOXCAD?

BOXCAD allows modifying electrical enclosures while respecting the rules required for approvals (UL and CSA).



In addition to facilitating the design, BOXCAD eliminates an exhausting communication process.

BOXCAD is an easy to use platform that allows you to quickly configure electrical enclosures, add several accessories ; threaded studs, different types of windows, temperature control solutions, DIN rails, etc.

**BOXCAD, it's like having your own manufacturing facility!**

<sup>1</sup> UL® is a registered trademark of the Underwriters Laboratories. All Rights Reserved.

<sup>2</sup> CSA® is a registered trademark of the CSA Group. All Rights Reserved.

## Your dimensions



With BOXCAD it is possible to define the dimensions required for your enclosure.

- ▶ **Define the size of your box within the dimensions limits**
- ▶ **Takes into account the production capacity of EXM while maintaining the required certifications**

## Your colors



Choose from a wide variety of paint colors and finishes.

- ▶ **Receive the price associated with this change immediately, this also reduces paint supply delays**

## Your cutouts



Use the Drag & Drop interface of BOXCAD to position holes and knockouts on any surface of your box.

- ▶ **All cutouts will be made prior to the painting process**
- ▶ **Finished cutouts without sharp edges or imperfections**

# ONCE YOUR BOXCAD IS ORDERED, IT'S READY TO BE PRODUCED\*

**One of the most decisive advantages of BOXCAD is the production speed of your electrical box.**

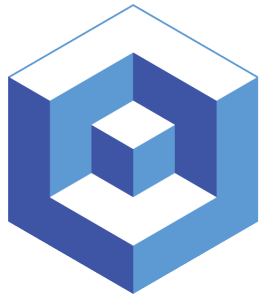
Whether for an order of 1 or more than 100 boxes, your order will be treated as a priority. In fact, when you configure your enclosure through BOXCAD, all files that are required for production are generated automatically.

**This production time is unrivalled in the industry.**

In addition to obtaining your enclosure in a short delay, you will receive it ready to be assembled with your components, thus facilitating your assembly and saving valuable time.







# **BOXCAD®**



## **BOXCAD ADVANTAGES**

---

*Discover the benefits of working with  
EXM's product configurator*

*YOU MIGHT THINK THAT THE  
PRODUCT CONFIGURATION  
PROCESS IS TOO COMPLEX  
AND EXPENSIVE.*

*THINK AGAIN, THE BOXCAD  
PRODUCT CONFIGURATOR BRINGS  
VALUE TO YOUR BUSINESS.  
DISCOVER HOW:*

## Custom manufacturing made easy

The industry demands products that are custom made and responding to specific needs.

- ▶ **Offer a custom made product at the best price possible**
- ▶ **Offers an easy to use interface that allows you to fully access the modification capacities offered by EXM**

## Service graciously offered to EXM customers

No P.O. is necessary to use the BOXCAD product configurator.

The service is offered to EXM customers who request an access.

## Accessibility

The BOXCAD service is accessible at all times and from anywhere in the world.

- ▶ **Simply use your web browser on a computer or a tablet connected to the Internet**
- ▶ **No installation required**

## Innovative product configurator

Over the last decade, EXM has constantly refined the BOXCAD configurator.

The constant addition of new features ensures the development of this innovative tool allowing BOXCAD users to improve the design of their electrical enclosure.

## Typical CAD aren't easy to use

The use of a reference standard drawing integrated to a CAD software is currently the standard in the industry. This process is based on human expertise that generates costs and complications.

We are...

- ▶ **Providing a complement to CAD softwares**
- ▶ **Reducing the drafting time**
- ▶ **Providing complete 2D & 3D drawings**
- ▶ **Eliminating the approval process**

## An interactive catalog

The EXM catalog provides a limited number of products that cannot satisfy all needs. The vast majority of EXM products are available on BOXCAD, where you have the option to customize them according to your needs.



## Quotation & orders

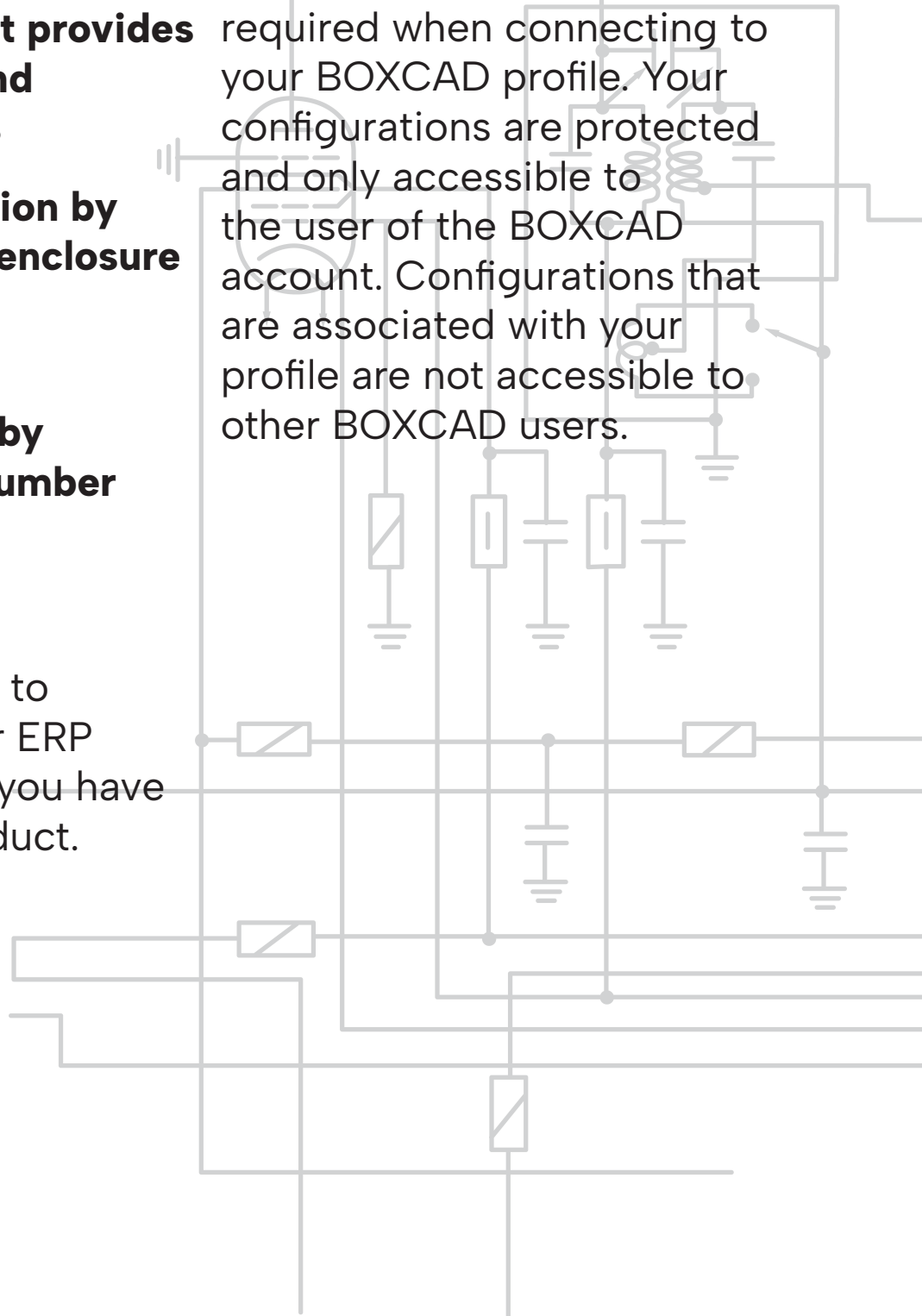
BOXCAD is a powerful quotation tool.

- ▶ **An algorithm that provides the right price and eliminates errors**
- ▶ **Receive a quotation by email once your enclosure is designed**
- ▶ **Reducing order-processing time by creating a part number specific to your configuration**

Your order is ready to be entered into our ERP system as soon as you have designed your product.

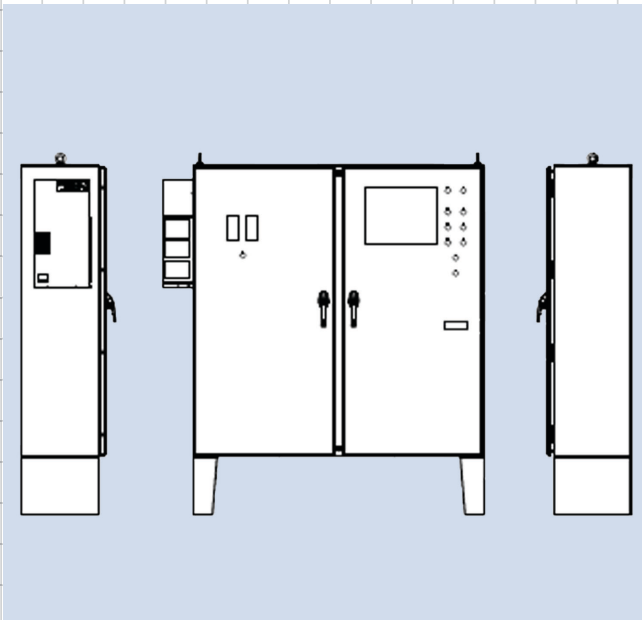
## Security & intellectual property

An authentication process is required when connecting to your BOXCAD profile. Your configurations are protected and only accessible to the user of the BOXCAD account. Configurations that are associated with your profile are not accessible to other BOXCAD users.



# TECHNICAL DRAWINGS

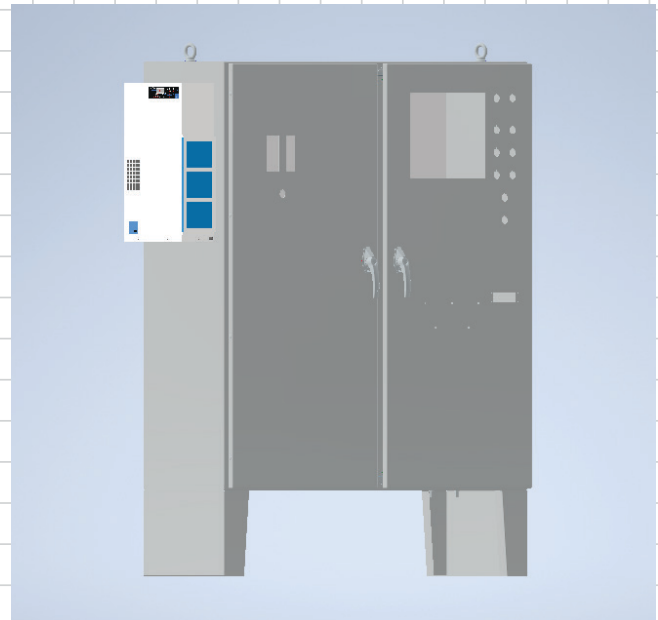
**BOXCAD allows users to easily obtain technical drawings without having to place an order.**



## 2D Drawings

The drawings will facilitate the elaboration of your specifications and sketch, as you will get the full details of your EXM enclosure configuration.

- ▶ **Provided in .pdf and .dxf formats**



## 3D Drawings

The drawing will allow you to import your EXM enclosure to the vast majority of CAD systems

- ▶ **Provided in a .pdf and .stp formats**





## Quality service & support

The BOXCAD team is dedicated to offer the support you need to complete your custom enclosure projects. We encourage our customers to contact us directly.

Support request and Comments can be sent to:  
**[BOXCAD@exmweb.com](mailto:BOXCAD@exmweb.com)**

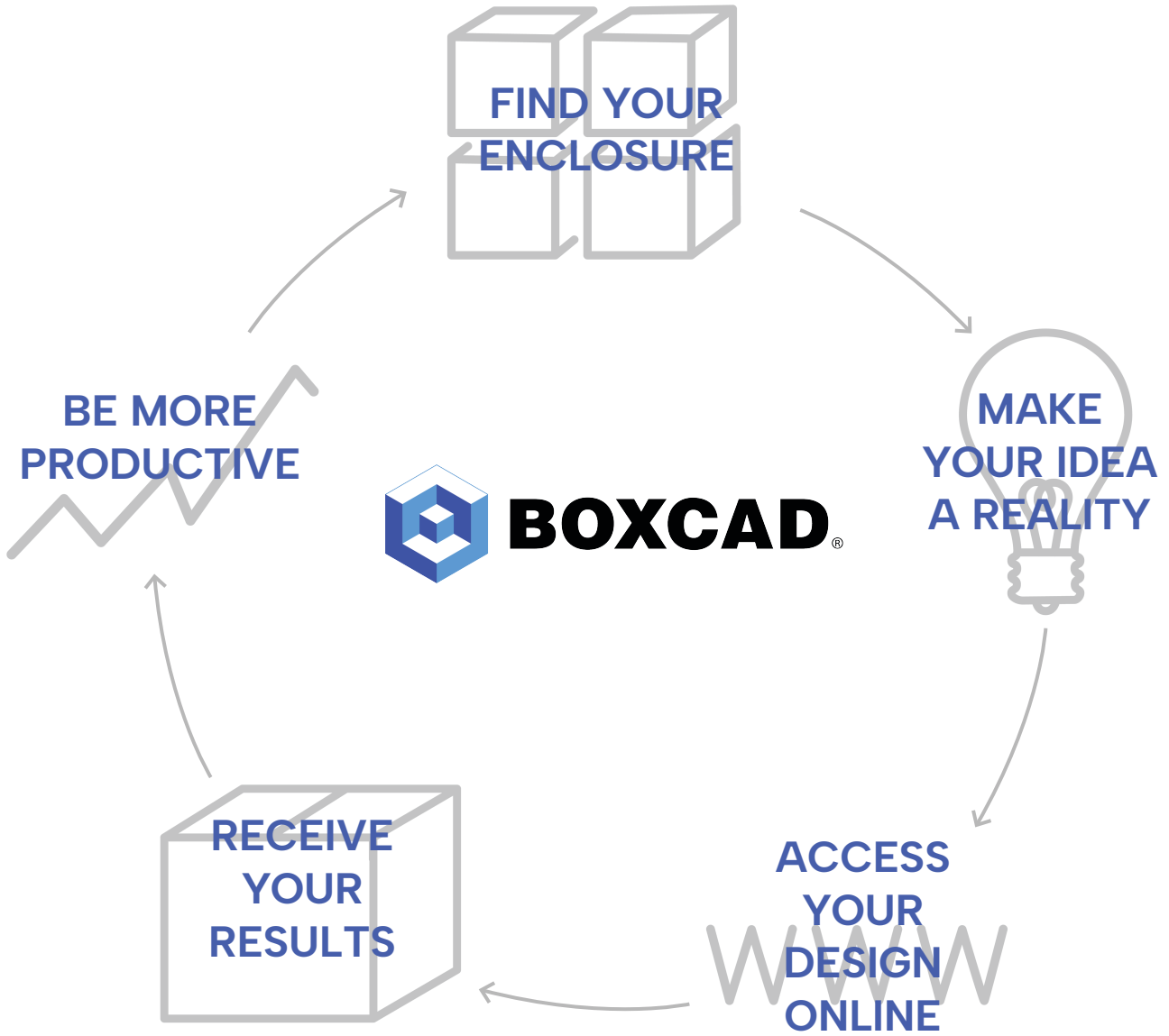
## Training on BOXCAD

Ask your EXM representative to register for one of our BOXCAD seminars. Seminars are conducted by accredited trainers and enable you to obtain a recognized BOXCAD certification.

## VIP Service

Get your own library of cutouts and accessories in BOXCAD. Ask EXM to add your custom designs in BOXCAD.

***THE VIP SERVICE FROM  
BOXCAD EXCEEDS  
EXPECTATIONS!***





**BOXCAD®**

**START WITH  
BOXCAD**

*You are ready to start your **BOXCAD** project.*

***ENTER THE BOXCAD  
ENVIRONMENT AND DISCOVER  
THE FUNCTIONALITIES  
MADE AVAILABLE TO FACILITATE  
YOUR ENCLOSURE DESIGN.***

# ACCESS TO: BOXCADEXM.COM

## 1. Select your language

► French ► English ► Spanish ► Chinese



Welcome!  
[How it works?](#)

1

Selection

2

Configuration

3

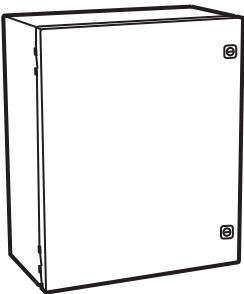
Finish

English ▼

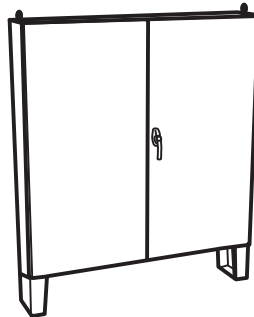


Click One of the Categories Below

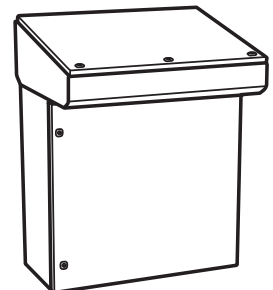
Search



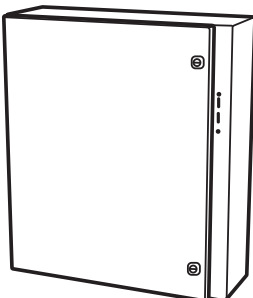
Wall Mount



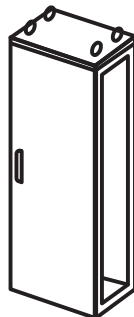
Free-Standing



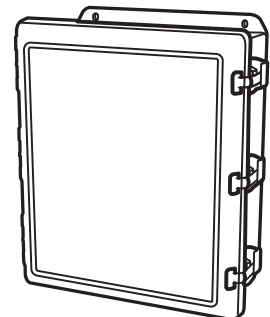
Consoles



Disconnet



Modular



Non Metallic



## 2. Enter your login information

- ▶ Multiple users can use a single BOXCAD account in order to facilitate the access to your BOXCAD configurations.

## 3. Retrieve your login information

- ▶ If you forgot your password or username, it is possible to request this information by using the email address used to create your BOXCAD account. Simply click on the link.

## 4. Useful links

- ▶ Video tutorials covering features and accessories
- ▶ Stay ahead of the curve with our informative newsletters
- ▶ Reach out to our dedicated team for prompt support via email or phone

You are not signed in  
Please sign in to access all features



### Sign In

[Forgot Password](#)

[Create new account](#)

[Sign in](#)

### Useful links

[BOXCAD Resources](#)

[EXM Standard Enclosure](#)

[Newsletters](#)

[Contact Us](#)

[Returns](#) [Privacy Policy](#) [Terms & Conditions](#)

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# DURING YOUR FIRST USE, IT IS IMPORTANT TO CREATE A USER ACCOUNT

Please note that your request for a **BOXCAD** account will be submitted for validation and it will be activated within a short time.



## Create account

Your personal information

Your Full Name*	Phone Number*	Password*
Your Email Address*	Username*	Confirm Password*

Correspondance Language\*

English  Français  Chinese  Español

Your company information

Company Name*	Address*	City ▼	Postal Code*
Country* ▼	Province ▼	Company Website	

Your distributor information

Distributor Name	Sales Representative	Distributor Email
------------------	----------------------	-------------------

Your distributor information

Additional Email Address	Additional Email Address	Additional Email Address
--------------------------	--------------------------	--------------------------

I have read and I accept the [Terms of Service](#) and [Privacy Policy](#).\*

\*Mandatory fields

[Cancel](#)

[Create account](#)

# 1. Enter your personal information

Your personal information

Your Full Name*	Phone Number*	Password*
Your Email Address*	Username*	Confirm Password*

- ▶ If you know your EXM representative, it is important to include their contact information, so that person may assist you.

# 2. Enter your company information

Your company information

Company Name*	Address*	City ▼	Postal Code*
Country* ▼	Province ▼	Company Website	

# 3. Additional email address

Your distributor information

Additional Email Address	Additional Email Address	Additional Email Address
--------------------------	--------------------------	--------------------------



- ▶ It is possible to add up to 4 email recipients linked to your BOXCAD account. Recipients will receive a copy of any operation carried out on the said BOXCAD account.

For example, different stakeholders such as colleagues, designers or buyers may receive a copy of the communications to ensure they are kept up-to-date.

# START YOUR CONFIGURATIONS

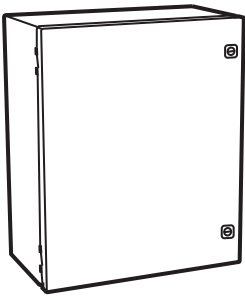
## 1. Start a new project

- ▶ In order to start a new configuration, simply select the required category to reach the enclosure selection menu

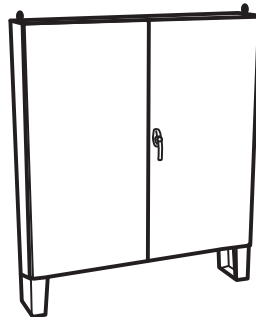
 **BOX CAD** | Welcome!  
How it works? 1 Selection — 2 Configuration — 3 Finish English  

Click One of the Categories Below

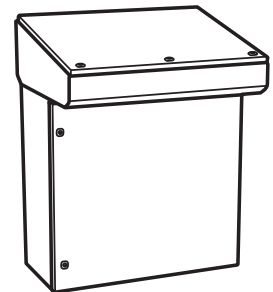
Search 



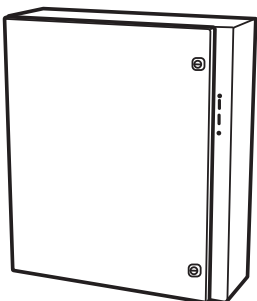
Wall Mount



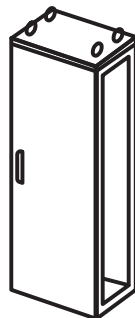
Free-Standing



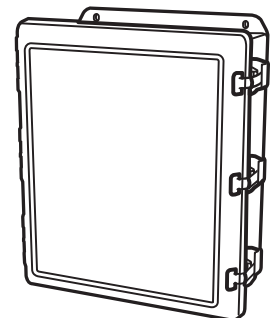
Consoles



Disconnnet



Modular



Non Metallic

# 1. Load an existing project

- ▶ Allows users to review an existing configuration
- ▶ Allows the user to load an existing BOXCAD configuration to make changes and save it under a new name

Your BOXCAD account can therefore be used to store your EXM enclosure configurations. BOXCAD will archive the latest revision of your configurations.

## Your configurations history

Company Name*	Address*	City	
DAN-U2D-T (REV 0)	1100EH I NEMA 1 Pull box		
24-160834 (REV 0)	5412ES I NEMA 4/12		
24-160831 (REV 0)	5412ES I NEMA 4/12		
24-160830 (REV 0)	5412ES I NEMA 4/12		
24-160829 (REV 0)	5412ES I NEMA 4/12		
24-160815 (REV 0)	5412ES I NEMA 4/12		
24-160813 (REV 0)	5412ES I NEMA 4/12		
24-160773 (REV 0)	5412ES I NEMA 4/12		
24-160774 (REV 0)	5412ES I NEMA 4/12		
24-160775 (REV 0)	5412ES I NEMA 4/12		
24-160776 (REV 0)	5412ES I NEMA 4/12		
24-160777 (REV 0)	5412ES I NEMA 4/12		
24-160778 (REV 0)	5412ES I NEMA 4/12		

- Sign out
- Configurations history
- Account Information
- Master Version
  
- Useful links**
- [BOXCAD Resources](#)
- [EXM Standard Enclosure](#)
- [Newsletters](#)
- [Contact Us](#)

# DIFFERENT FAMILIES OF PRODUCTS

Several series of industrial and commercial boxes are available to configure depending on your needs. Simply select the product that meets your requirements according to the available criterias; construction, NEMA classification, enclosure usage

## 1. Enclosure informations

- ▶ Select your enclosure based on the dimension range

Select a format of enclosure

 <p><b>ES Single door</b> Medium industrial enclosure Range (height x width x depth) 12"x12"x3" to 72"x36"x24"</p>	 <p><b>ESCH Single door</b> Small industrial utility enclosure Range (height x width x depth) 6"x6"x4" to 36"x36"x20"</p>	 <p><b>ES Double door</b> Medium industrial enclosure Range (height x width x depth) 16"x24"x3" to 54"x72"x24"</p>	 <p><b>Sloped top</b> Medium industrial enclosure Range (height x width x depth) 12"x12"x3" to 72"x36"x24"</p>	 <p><b>CH Single door</b> Medium industrial enclosure Range (height x width x depth) 4"x4"x3" to 16"x14"x10"</p>
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Select a series of enclosure

	<p><b>5412 ES</b> Type 4, 12   Single door mild steel enclosure For industrial machine applications</p> <hr/> <p>Range (height x width x depth) 12"x12"x3" to 72"x36"x24"</p>	
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# WALL-MOUNT enclosures

[BACK TO ENCLOSURE TYPE](#)

NEMA / IP RATING

## Select a format of enclosure




**ES Single door**  
Medium industrial enclosure  
Range (height x width x depth)  
12"x12"x3" to 72"x36"x24"



**ESCH Single door**  
Small industrial utility enclosure  
Range (height x width x depth)  
6"x6"x4" to 36"x36"x20"



**ES Double door**  
Medium industrial enclosure  
Range (height x width x depth)  
16"x24"x3" to 54"x72"x24"



**Sloped top**  
Medium industrial enclosure  
Range (height x width x depth)  
12"x12"x3" to 72"x36"x24"



**CH Single door**  
Medium industrial enclosure  
Range (height x width x depth)  
4"x4"x3" to 16"x14"x10"

## Select a series of enclosure



**5412 ES**  
Type 4, 12 | Single door mild steel enclosure  
For industrial machine applications  
Range (height x width x depth)  
12"x12"x3" to 72"x36"x24"



**5412 ESS**  
Type 4, 12 | Single door stainless steel enclosure  
For industrial machine applications  
Range (height x width x depth)  
12"x12"x3" to 72"x36"x24"



**5412 EAL**  
Type 4, 12 | Single door aluminium enclosure  
For industrial machine applications  
Range (height x width x depth)  
12"x12"x3" to 72"x36"x24"

# START A NEW MODULAR PROJECT

The selection menu allows you to configure single doors and double doors modular cabinets. You will be able to specify the required part (door, side panel, etc.) for each side of the cabinet to be configured.



# Modular enclosures

[BACK TO ENCLOSURE TYPE](#)

NEMA / IP RATING  
All

Search by keyword



## Select a series of enclosure



### 6500 MXKSD

Type 12, 13 | Single Door

Range (height x width x depth)  
(700 x 400 x 400)mm to (2200 x 1800 x 1600)mm



### 6500 MXKDD

Type 12, 13 | Double Door

Range (height x width x depth)  
(700 x 400 x 400)mm to (2200 x 1800 x 1600)mm



### 6500 MXUSD

Type 12, 13 | Single door disconnect

Range (height x width x depth)  
(700 x 400 x 400)mm to (2200 x 1800 x 1600)mm



### 6500 MXUDD

Type 12, 13 | Double door disconnect


Range (height x width x depth)  
(700 x 400 x 400)mm to (2200 x 1800 x 1600)mm



# CREATE YOUR OWN MODULAR

Using existing configurations or by creating new ones, drag the required cabinets one by one in position.

## 1. Select the dimension, material, color

Start Family Selection Configuration Drag & Drop Finish

---

Frame

Enclosure Dimension Selection (mm)

Height (mm) Width (mm) Depth (mm)

Material Type

Mild Steel

Color Texture

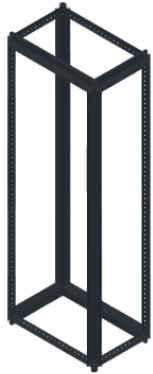
Smooth

Textured

Brushed


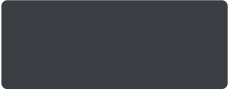

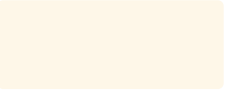








2B

Color



---

Choose Color (\*)



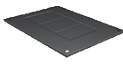
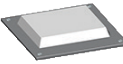


 <input type="radio"/> WHITE RAL9003	 <input type="radio"/> IRON GRAY RAL7011	 <input type="radio"/> VISTA GREEN RAL6011	 <input type="radio"/> CREAM RAL9001
 <input type="radio"/> STONE GRAY RAL7030	 <input type="radio"/> HYDRO GREEN #503-114	 <input type="radio"/> HYDRO GREEN #14241	 <input type="radio"/> HYDRO GREEN #24241
 <input type="radio"/> GRAY WHITE RAL9002	 <input type="radio"/> CARMINE RED RAL3002	 <input type="radio"/> SKY BLUE RAL5015	 <input type="radio"/> CUSTOM COLOR

## 2. Select covers (top, bottom, left, right, front , back)


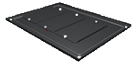

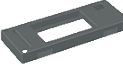

- ▶ Choose the material type, color and texture for each panel

### Select Panel




Top  Bottom Left Right Front Back

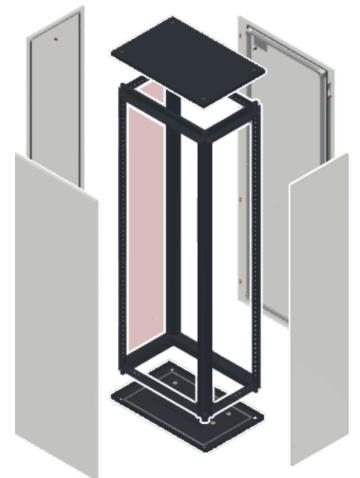
					
<input checked="" type="radio"/> No Panel Or Cover	<input type="radio"/> 6500 MXT Top Cover	<input type="radio"/> 6500 MXTC Cable Entry Top	<input type="radio"/> 6500 MXTP Pagoda Fan Top	<input type="radio"/> 6500 MXTV Vented Top	<input type="radio"/> 6500 MXTGP Gland Plate Top

Top Bottom  Left Right Front

				
<input checked="" type="radio"/> No Panel Or Cover	<input type="radio"/> 6500 MXB Base Cover	<input type="radio"/> 6500 MXBM Mobile Base	<input type="radio"/> 6500 MXBT Transport Base	<input type="radio"/> 6500 MXSCE_B Cable Entry Trough Base

Top Bottom Left  Right Front

		
<input checked="" type="radio"/> No Panel Or Cover	<input type="radio"/> 6500 MXC Side Cover	<input type="radio"/> 6500 MXDS Side Door



- ▶ You can opt for different side options for your cabinet (Solid Cover, Vented cover, Side Door)

### Vented

- No
- Yes

Type :

1/4» Round (5/16» Staggered 45°) ▾

### Inner Panel

- No
- Yes


### Inner Panel Material

- Mild Steel
- Aluminum
- Galvanized Steel
- Stainless Steel 304
- Stainless Steel 316
- Perforated Steel

- ▶ You can add inner panel and rack mounts

### 3. Customize your plinth

- ▶ Plinth height
- ▶ Plints type (solid, vented, watertight)
- ▶ Plinth material (mild steel, aluminum, stainless steel, 2B)
- ▶ Plinth color & finish (23 colors or custom option)


Start
Family Selection
Configuration
Drag & Drop
Finish

**Accessories (\*)**

Plinth

Yes

No

Height (mm) :

100

---

Type :

6500 MXPLF (Solid) ▼

**Color Texture**

Mild Steel

Aluminum

Stainless Steel 304


Stainless Steel 316

---

**Plinth Color Texture**


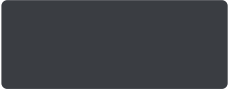

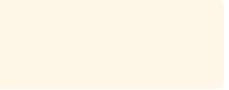








Smooth

Textured



---


**Plinth Color (\*)**

			
<input type="radio"/> WHITE RAL9003	<input type="radio"/> IRON GRAY RAL7011	<input type="radio"/> VISTA GREEN RAL6011	<input type="radio"/> CREAM RAL9001
			
<input type="radio"/> STONE GRAY RAL7030	<input type="radio"/> HYDRO GREEN #503-114	<input type="radio"/> HYDRO GREEN #14241	<input type="radio"/> HYDRO GREEN #24241
			
<input type="radio"/> GRAY WHITE RAL9002	<input type="radio"/> CARMINE RED RAL3002	<input type="radio"/> SKY BLUE RAL5015	<input type="radio"/> CUSTOM COLOR

32 - START

## 4. Customize your seismic bracket kit

- ▶ Seismic bracket material (mild steel, stainless steel)
- ▶ Seismic bracket color (smooth, textured, brushed, 2B)
- ▶ Seismic bracket finish (smooth, textured, brushed, 2B)

Start Family Selection Configuration Drag & Drop Finish

---

**Seismic Bracket**

Yes  
 No

**SeismicBracket Material (\*\*)**

Mild Steel  
 Stainless Steel 304  
 Stainless Steel 316




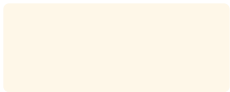








---

**Seismic Bracket Color Texture**

Smooth  
 Textured  
 Brushed  
 2B

---

**Seismic Bracket Color (\*)**

 <input type="radio"/> WHITE RAL9003	 <input type="radio"/> IRON GRAY RAL7011	 <input type="radio"/> VISTA GREEN RAL6011	 <input type="radio"/> CREAM RAL9001
 <input type="radio"/> STONE GRAY RAL7030	 <input type="radio"/> HYDRO GREEN #503-114	 <input type="radio"/> HYDRO GREEN #14241	 <input type="radio"/> HYDRO GREEN #24241
 <input type="radio"/> GRAY WHITE RAL9002	 <input type="radio"/> CARMINE RED RAL3002	 <input type="radio"/> SKY BLUE RAL5015	 <input type="radio"/> CUSTOM COLOR



# 5. Accessories

► Add a thermostat, heating unit, castor wheels, etc.


Start
Family Selection
Configuration
Drag & Drop
Finish



○ **Thermostat**  
01140.9-00  
+32 To +140°F

Quantity: \_\_\_\_\_



○ **Thermostat**  
01141.9-00  
+32 To +140°F

Quantity: \_\_\_\_\_



○ **Thermostat**  
01146.9-00  
+0 To +60°C

Quantity: \_\_\_\_\_



○ **Thermostat**  
01147.9-00  
+0 To +60°C

Quantity: \_\_\_\_\_



○ **Thermostat**  
01170.0-00  
+5 To +60°C

Quantity: \_\_\_\_\_



○ **Thermostat**  
01170.0-00  
+5 To +60°C

Quantity: \_\_\_\_\_



○ **Thermostat**  
01172.0-00  
-10 To +140°F

Quantity: \_\_\_\_\_



○ **Heating Unit**  
01602.0-00  
Capacity (8W)

Quantity: \_\_\_\_\_



○ **Heating Unit**  
01609.0-00  
Capacity (10W)

Quantity: \_\_\_\_\_



○ **Heating Unit**  
01610.0-00  
Capacity (13W)

Quantity: \_\_\_\_\_



○ **Heating Unit**  
14000.0-00  
15W To 150W

Quantity: \_\_\_\_\_



○ **Castor Wheels**  
886 CB200  
With Brakes  
200lbs

Quantity: \_\_\_\_\_



○ **Castor Wheels**  
886 CLEV  
With Levelling  
Feet

Quantity: \_\_\_\_\_



○ **Castor Wheels**  
886 CLEV2  
With Levelling  
Feet

Quantity: \_\_\_\_\_

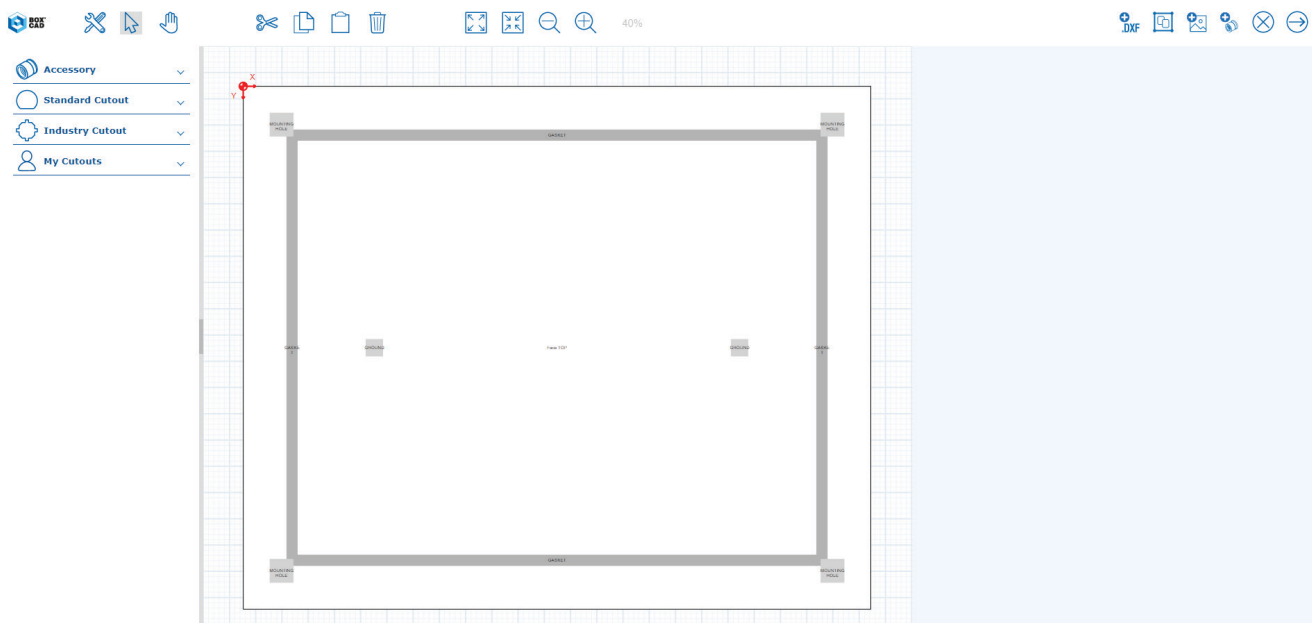
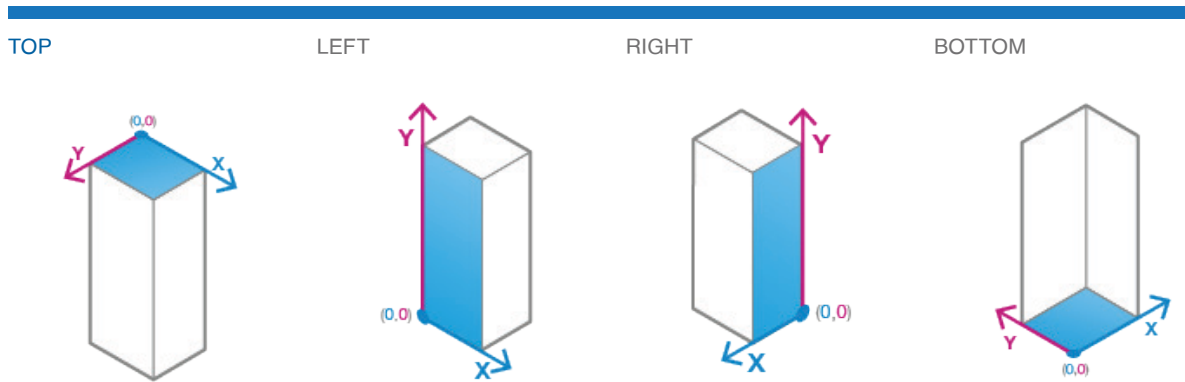


# 6. Cutouts

- ▶ Select a face to add cutouts and accessories (top, left, right, bottom, back, front)



Select a face to add cut-out and accessories

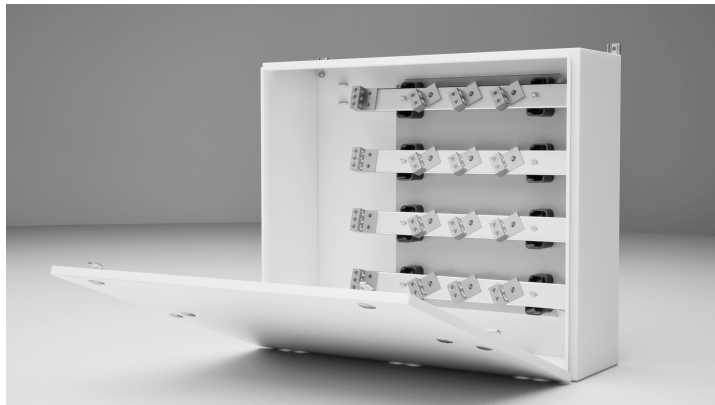


# START A NEW DISTRIBUTION PROJECT

**BOXCAD allows modifying code compliant distribution boxes, allowing you to specify the rating and the required number of wires.**

## 1. Aluminium bus bars

- ▶ Aluminum bus bars are commonly used for applications requiring the lightness of aluminum (approximately half the weight / amper compared to copper) and a moderate level of rigidity.



## 2. Copper bus bars

- ▶ Copper bus bars offer a recognized level of quality in the industry.



# Distribution enclosure

[BACK TO ENCLOSURE TYPE](#)

NEMA / IP RATING  
All

Search by product name or catalog number



## Select a format of enclosure




**Bus Bar**  
Bus Bar Splitter Troughs  
Range (height x width x depth)  
225A to 2500A - 3 to 5 wires



**Metering**  
Metering Cabinet  
Range (height x width x depth)  
20" x 20" x 10" to 48" x 48" x 12"




**Splitter Boxes**  
Splitter Boxes  
Range (height x width x depth)  
70A to 600A - 3 to 4 wires




**Splitter Troughs**  
Splitter Troughs  
Range (height x width x depth)  
70A to 600A - 3 to 4 wires

## Select a series of enclosure



**1100 BT**  
Type 1 | Bus bar splitter trough with aluminium bus bars and cover secured by screws  
Range (height x width x depth)  
225A to 2500A - 3 to 5 wires



**1100 BTCU**  
Type 1 | Bus bar splitter trough with copper bus bars and cover secured by screws  
Range (height x width x depth)  
225A to 2500A - 3 to 5 wires



**1412 BT**  
Type 4, 12 | Bus bar splitter trough with aluminium bus bars and cover secured by 1/4 turns  
Range (height x width x depth)  
225A to 2500A - 3 to 5 wires



**BOXCAD®**

# CONFIGURATION

---

*It is now time to configure your EXM enclosure.*

***CREATE YOUR OWN  
STANDARDS WITH BOXCAD.***

# DEFAULT SETTINGS

To facilitate the selection, default settings are pre-selected: the color, finish, locking mechanism and other options correspond to those of a standard EXM product. These settings can be modified according to your needs.

**BOX CAD** | Welcome! How it works?

1 Selection      2 Configuration      3 Finish

English

## SELECT A TAB

CONFIGURATION    ACCESSORIES    DRAG & DROP

**MEASUREMENTS**

**MATERIAL, PAINT & PRIMER**  
Learn about enclosure material and coating

**Series 5100 ES**

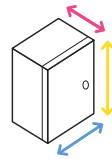
SELECTION    FINISH >

## Menu and options (configuration, accessories, drag & drop)

- ▶ The configuration menu and options will differ depending on the enclosure model.
- ▶ Some EXM products offer more options than others. The options are available depending on the design of the selected product.

## 1. Defining the required dimensions

- ▶ The user can specify the dimensions of the enclosure using the metric or the imperial system.



### MEASUREMENTS



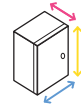
#### Unit of measure



Metric



Imperial



#### Dimensions

Custom dimension

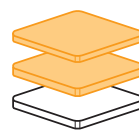
Catalog (Height, Width, Depth)

12 x 12 x 06

Please note that the choice of measurement system will be applied in the following stages. It is possible to select a “Catalog” dimension from the drop-down menu, this allows you to quickly select a familiar size.

## 2. Choosing the right material

- ▶ Depending on the enclosure’s application or the environment where the electrical box will be installed, it is possible to easily select the appropriate material for your configuration.



### MATERIAL, PAINT & PRIMER



Learn about enclosure material and coating

#### Material

Mild Steel

#### Paint texture

Smooth

#### Paint color

ANSI/ASA 61 Standard Grey (RAL7042)

Primer

### 3. Select the finish

- ▶ Opt for different material and paint finishes. EXM recommend the use of a textured finish for painted enclosures. We also offer a powder coat primer for outdoor use.

### 4. Choose the required color

- ▶ Specify the required color from our large selection of in stock paint. The colors are identified by the RAL classification system.

### 5. Custom colors

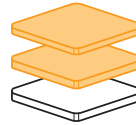
- ▶ You can also specify a color that is not available in the selection; in this case, our purchasing department will ensure the feasibility and set a price associated with the special color. (RAL, PANTONE, etc.)

## SELECT A TAB

CONFIGURATION

ACCESSORIES

DRAG & DROP



### MATERIAL, PAINT & PRIMER

[Learn about enclosure material and coating](#)

#### Material

Mild Steel

#### Paint Texture

Smooth

#### Paint Color

ANSI/ASA 61 Standard Grey (RAL7042)

- White (RAL9003)
- Iron Grey (RAL7011)
- VISTA Green (RAL6011)
- Cream (RAL9001)
- Stone Grey (RAL7030)
- Hydro Green (#503-114)
- Hydro Green (#14241)
- Hydro Green (#24241)
- Grey White (RAL9002)
- Carmine Red (RAL3002)
- Sky Blue (RAL5015)
- Pebble Grey (RAL7032)
- Deep Orange (RAL2011)
- Signal Blue (RAL5005)
- ANSI/ASA 70 Light Gray (RAL7038)
- Light Ivory (RAL1015)
- Light Blue (RAL5012)
- Sierra Tan Sand
- Black (RAL9005)
- ANSI/ASA 61 Standard Gray (RAL7042)
- Traffic Yellow (RAL1023)
- Custom Color



## 6. Inner panel

- ▶ EXM includes an interior panel with most of its enclosures. If not required, it is possible to remove it.
- ▶ The dimensions of the interior panel automatically adjust to the dimensions of your enclosure. When 'No' to Inner Panel is selected, it is possible to remove the mounting studs required for the installation of the inner panel.

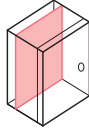
## 7. Define the inner panel (material/color)

- ▶ Interior panels are generally made of galvanized steel. It is possible to specify the material and color necessary for your project according to the different options.

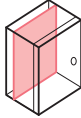
**SELECT A TAB**

CONFIGURATION	ACCESSORIES	DRAG & DROP
---------------	-------------	-------------

---

INTERIOR OPTION▼

---

Inner Panel

Yes

No

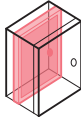
**Material**  

Galvanized Steel▼

**Paint Color**  

Unpainted▼

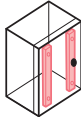
---

Swing Out Panel

Yes

No

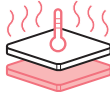
---

Door Stiffener

Yes

No

---

Insulation

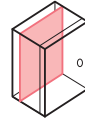
Yes

No

---

## 8. Add a swing-out panel

- ▶ When adding a swing-out panel to your enclosure, please specify the distance between the inner door and the front door, from a minimum of 3" (75mm).



Inner Panel

Yes

No

Depth (from Main Door to Inner Dor)

15

Material

Mild Steel

Paint Texture

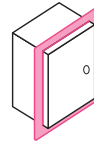
Smooth

Paint Color

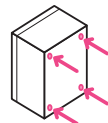
ANSI/ASA 61 Standard Grey (RAL7042)

## 9. Mounting holes

- ▶ EXM provides mounting holes with most of its wall mounting enclosures. It is possible to remove them if necessary.
- ▶ If the mounting holes must be re-positioned, they can be relocated during the Drag & Drop step.



EXTERIOR OPTION



Mounting Holes

Yes

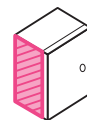
No



Frame

Yes

No



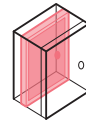
Plastic Wrap

Yes

No

## 10. Add doors stiffeners

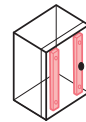
- ▶ The door stiffeners are not pre-selected in BOXCAD. If needed, it is possible to add door stiffeners to your configuration.
- ▶ Door stiffeners are mechanically retained to the door by welded studs.



Swing Out Panel

Yes

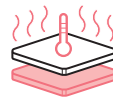
No



Door Stiffener

Yes

No



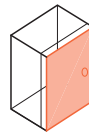
Insulation

Yes

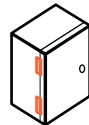
No

## 11. Add a 3-points-lock system

- ▶ On enclosures with a height of 20" (500 mm) or more, it is possible to select the optional 3-points-lock system.
- ▶ This system is not offered on standard EXM products of this size. Therefore, BOXCAD allows you to easily opt for this lock system without having to use an engineering service.



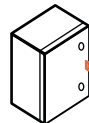
COVER



Hinger Side

Left

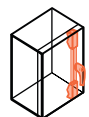
Right



Padlock

Yes

No



Three Point Lock

Yes

No

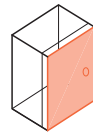
## 12. 3-points-lock system options

- ▶ The vast majority of EXM enclosures with a height of 42" (1067mm) or more automatically have a 3-point-lock mechanism.
- ▶ Certain types of handles come as standard according to the type of enclosures. It's also possible to select a specific handle for your project.

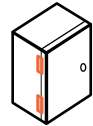
## 13. Add mounting feet

- ▶ At the Drag & Drop step, it's possible to select different types of wall mounting feet and position them as required.

You will also be asked to define the installation method; bolted, welded or supplied as an assembly kit.



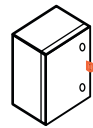
COVER



Hinger Side

Left

Right



Padlock

Yes

No



Three Point Lock

Yes

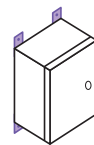
No

### SELECT A TAB

CONFIGURATION

ACCESSORIES

DRAG & DROP



MOUNTING FEET

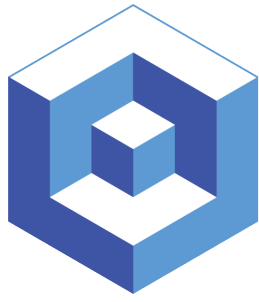


880 MFT



885 ESMF1





# BOXCAD®

## DRAG & DROP

---

*The Drag and Drop allows you to fully customize your box.*

*THE BOXCAD DRAG & DROP  
INTERFACE OFFERS A PREVIEW  
OF YOUR CONFIGURATION  
IN REAL TIME TO FACILITATE  
MODIFICATIONS.*

# DRAG & DROP SELECTION MENU



Welcome!  
How it works?

1 Selection

2 Configuration

3 Finish

English

## SELECT A TAB

CONFIGURATION ACCESSORIES DRAG & DROP

Dear customer, To use this function, you need to select a plane. You can do this by using the yellow button at the bottom of your 3D model or by directly tapping on the desired face in the 3D model.

12

PLANE BACK PLANE TOP PLANE BOTTOM PLANE RIGHT PLANE LEFT


SELECT A SIDE


SELECTION Series 5412 ES FINISH >

PLANE BACK PLANE TOP PLANE BOTTOM PLANE RIGHT PLANE LEFT PLANE DOOR PLANE INNER PANEL BACK

BOXCAD provides the possibility to modify each face of your box. Simply select the face that needs modifications to access the editing window (Drag & Drop).

# WORKING IN THE DRAG & DROP INTERFACE



**Welcome!**  
 How it works?
 
 ① Selection ——— ② Configuration ——— ③ Finish
 

 English ▼ 

SELECT A TAB

CONFIGURATION
ACCESSORIES
DRAG & DROP

**You are editing the Window Kit:**

880 HWK0808 

---

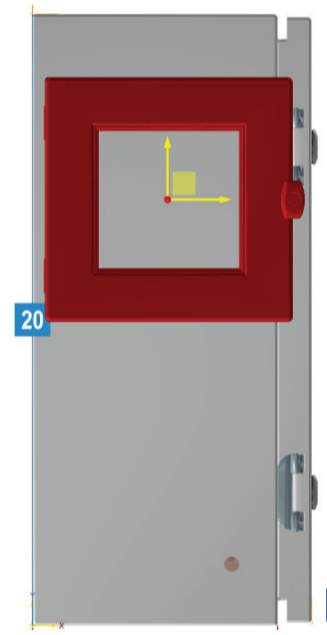
**Coordinate (in):**

X axis	Y axis	Z axis
<input type="text" value="5.165"/>	<input type="text" value="15.200"/>	<input type="text" value="0.000"/>

**Property:**

H	Box Face	Installation Option
90 ▼	Open ▼	Kit ▼

< DELETE
ACCEPT >









✓ ACCEPT

SELECTION
**Series 5412 ES**
FINISH

It is possible to add cutouts and accessories on the different faces of all BOXCAD configurations. The work surface has boundaries to easily identify areas where changes are not recommended.

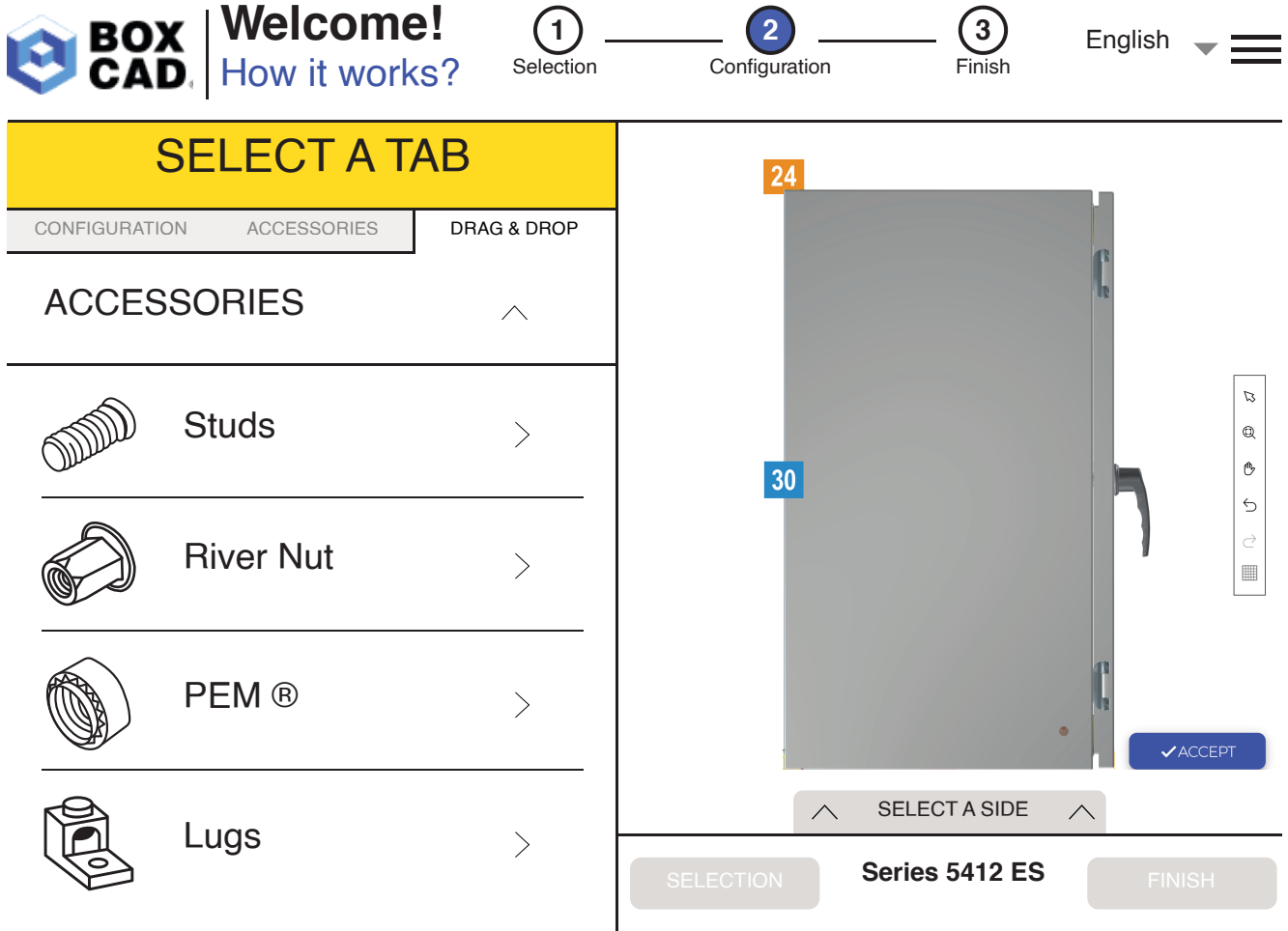
## THE DRAG & DROP TOOLBAR

The BOXCAD Drag & Drop toolbar offers all the necessary tools to modify your EXM enclosure.

Select	→	
Zoom	→	
Move	→	
Undo	→	
Redo	→	
Guide	→	

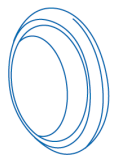


# “ACCESSORIES” MENU



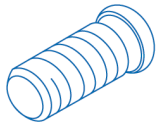
The “Accessories” menu allows you to select the available hardware that can be added to any face of your enclosure.

Some of the accessories can be installed either on the inside or the outside of the enclosure. Most of the accessories are available in various imperial and metric formats.



## BREATHERS

In certain environments, it is recommended to install a breather or a pressure condensation device to maintain the integrity of the enclosure and to protect the internal components.



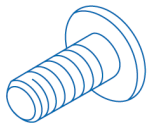
## WELDED STUDS

Welded in place, they can be used with a nut to secure accessories.



## WELDED STANDOFFS

Welded in place, they can be used with a mechanical screw to secure accessories.



## GROUND STUDS

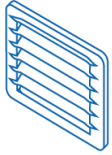
Grounding points are custom made for EXM and can be located almost anywhere on your enclosure.



## RIVET NUTS & PEMS®

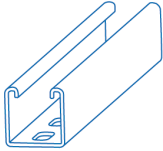
Inserted by pressure, the rivet nuts can be used with a mechanical screw to secure accessories; they are commonly known as “tub-tara”.

The PEMS can be used with a nut or a machine screw to secure accessories depending on the model.



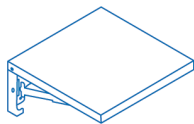
## **FILTER FANS AND GRILLS**

Choose OEM fans and grills, the required holes will be made by BOXCAD.



## **C-CHANNELS**

The C-Channels provide a solid provision to install heavy equipment. In conjunction with spring nuts, the C-Channels provides easy adjustment for mounting.



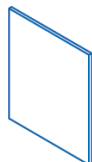
## **FOLDING SHELF**

OEM folding shelves can be installed by EXM on the different faces of your configuration. These shelves need little space and fit most laptops.



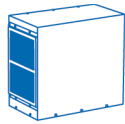
## **WINDOW KIT**

Choose a model from the catalogue or opt for a custom made version by specifying the required size.



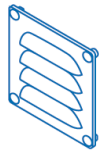
## **GLAND PLATE**

Gland plates facilitate the entry of cables in the enclosure. Choose a standard model from the catalogue or opt for a custom size.



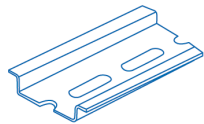
## A/C UNIT

Different types of air conditioning units are available in BOXCAD. Simply select the required model and EXM will cut the proper holes required for the installation of the unit.



## LOUVER PLATE

Different models of louver plate are available in BOXCAD. The ventilation plates will be manufactured with the same material as your box and will have the same finish.

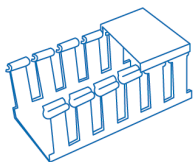


## DIN RAILS

Din Rails are used to install a wide range of electrical components.

At the Drag & Drop step, the user can opt from different models of Din Rails.

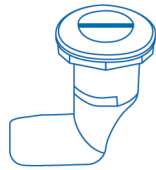
These rails are factory assembled, welded or screwed.



## WIRE DUCT

The wiring ducts are cut to the exact length specified at the Drag & Drop step.

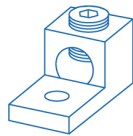
The wiring duct come installed or as a kit.



## LOCKS

At the Configuration and Drag & Drop steps, it's possible to change the locks models.

During the Drag & Drop step, the user can define each lock.



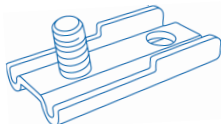
## LUGS

The lugs can be used for grounding purposes. They can be positioned on any face of your enclosure.



## MASKING TAPE

The masking tape provides a surface free of paint. The masking tape is applied before the painting process.



## MOUNTING FEET

The mounting feet can be positioned on any face of your enclosure. Choose from the different models offered by EXM.

# POSITIONING OF ACCESSORIES

## 1. SELECT AN ACCESSORY

- ▶ Through the different sub-menus and categories.

## 2. DRAG & DROP THE SELECTED ACCESSORY

- ▶ This action allows you to position the selected accessory on the work surface.

## 3. ENTER SPECIFICATIONS

- ▶ You can manually enter the positioning coordinates of your accessories.





## 4. INSTALLATION TYPES

- ▶ When applicable, the different types of installations will be offered to you in the form of a drop-down menu.


### SELECT A TAB

CONFIGURATION   ACCESSORIES   DRAG & DROP

#### ACCESSORIES

-  Studs >
-  River Nut >
-  PEM® >
-  Lugs >

You are editing the Studs :

4-40 x 1/4» 

---

**Coordinate (in):**

X axis	Y axis	Z axis
<input type="text" value="8.033"/>	<input type="text" value="4.488"/>	<input type="text" value="0.303"/>

**Property:**

**Welding Side**

Inside ▾

# POSITIONING OF THE LUGS

## 1. SELECT REQUIRED LUG

- ▶ Choose from the large selection of lugs offered exclusively by EXM.

## 2. DRAG & DROP ON THE DESIRED BAR

- ▶ Assign the lugs to their respective bars.

## 3. SPECIFY POSITIONING INFORMATION

- ▶ The positioning of the lugs on the busbars is facilitated by the design of the Drag & Drop interface which prevents interference with other elements such as insulators.







## 4. SPECIFY AN ANGLE


- ▶ You can specify the angle of installation of the lugs to facilitate the installation of the cables.

### SELECT A TAB

CONFIGURATION ACCESSORIES DRAG & DROP

#### ACCESSORIES

-  Lugs
-  Panel Board Lugs
-  Single Lugs
-  Double Lugs
-  Triple Lugs
-  Quadruple Lugs

**You are editing the Lugs :**  
881 BPD0350 

---

**Coordinate (in):**

X axis	Y axis	Z axis
<input type="text" value="3.364"/>	<input type="text" value="11.258"/>	<input type="text" value="2.053"/>

**Property:**

H	Installing Side
<input type="text" value="90"/>	<input type="text" value="Inside"/>

# «HOLE» SUB-MENU

**BOX CAD** | Welcome! How it works?

1 Selection — 2 Configuration — 3 Finish

English

---

**SELECT A TAB**


CONFIGURATION ACCESSORIES DRAG & DROP

STANDARD CUTOUT ^

---

Hole v

- Round
- Slot
- Rectangle
- Rectangle Radius
- Square



ACCEPT

^ SELECT A SIDE ^

SELECTION **Series 5100 ES** FINISH

---

Select the desired shape and specify the settings to be applied to this form.

Change a round hole by specifying the diameter; add a rectangular cutout by specifying the height and width required. It is possible to add almost any cutout pattern with the parametric hole options.



# « THREADED HOLE » SUB-MENU

The screenshot displays the BOXCAD software interface during the 'DRAG & DROP' configuration phase. At the top, the BOXCAD logo is on the left, followed by a 'Welcome! How it works?' message. A progress bar shows three steps: 1 Selection, 2 Configuration (active), and 3 Finish. The language is set to English. The main interface is split into a left sidebar and a right workspace. The sidebar has a yellow header 'SELECT A TAB' and three tabs: 'CONFIGURATION', 'ACCESSORIES', and 'DRAG & DROP'. Under 'DRAG & DROP', there are two main sections: 'STANDARD CUTOUT' and 'Threaded Hole'. The 'Threaded Hole' section is expanded, showing options for 'UNF', 'UNC', and 'ISO M Series'. Below this is a 'Marking' option. The right workspace shows a 3D model of a metal enclosure with a threaded hole. The hole is highlighted with a blue border and has dimension callouts: '30' for the diameter, '36' for the hole depth, and '12' for the hole offset. An 'ACCEPT' button is visible next to the model. At the bottom of the workspace, there is a 'SELECT A SIDE' button and a 'Series 5100 ES' label. The bottom navigation bar contains 'SELECTION', 'Series 5100 ES', and 'FINISH' buttons.

BOXCAD gives you the option to add threaded holes to your enclosure; the threads of the hole will be done at the factory. Choose from a wide selection of threaded holes from the library of recognized standards.

# PARAMETRIC CUTOUTS



**BOX  
CAD**

Welcome!  
How it works?

1

Selection

2

Configuration

3

Finish

English



## SELECT A TAB

CONFIGURATION

ACCESSORIES

DRAG & DROP

You are editing the Cutout:

Rectangle



Coordinate (in):

X axis

6.291

Y axis

15.087

Z axis

0.000

Property:



F

1

G

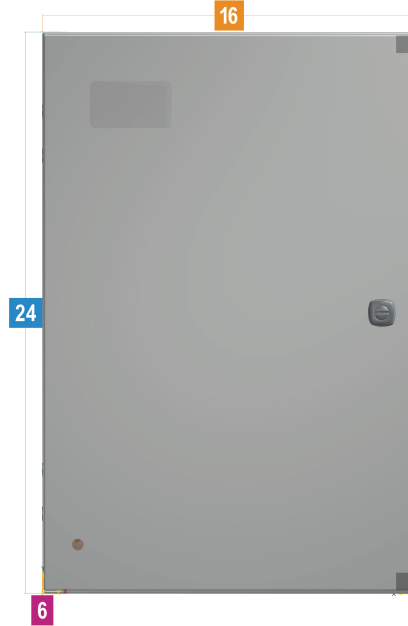
0.5

H

0

< DELETE

ACCEPT >



✓ ACCEPT

SELECT A SIDE

SELECTION

Series 5100 ES

FINISH

The BOXCAD product configurator optimizes the configuration through the use of parametric cutouts allowing the creation of hole patterns according to the user's criterias.

# INDUSTRY CUTOUTS



Welcome!  
How it works?

1 Selection

2 Configuration

3 Finish

English



## SELECT A TAB

CONFIGURATION

ACCESSORIES

DRAG & DROP

INDUSTRY CUTOUT



Allen Bradley



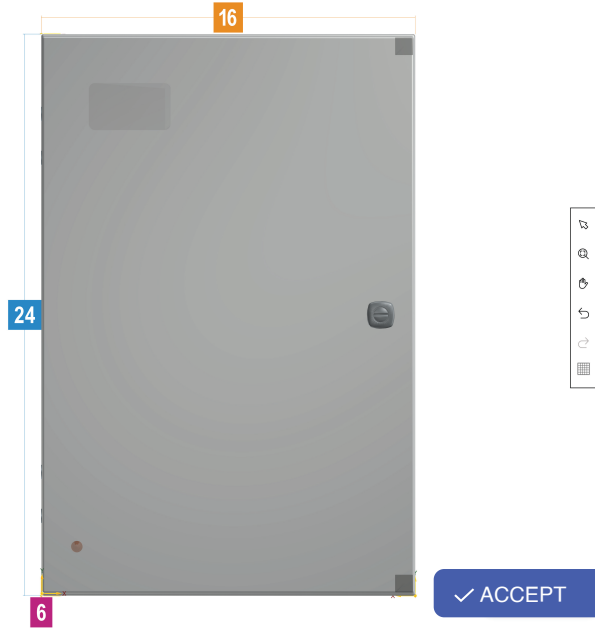
EXM Manufacturing Ltd.



Festo



Omron



SELECT A SIDE

SELECTION

Series 5100 ES

FINISH

Certain industry cutouts have different parametric features such as the possibility to add a fully customizable angle.

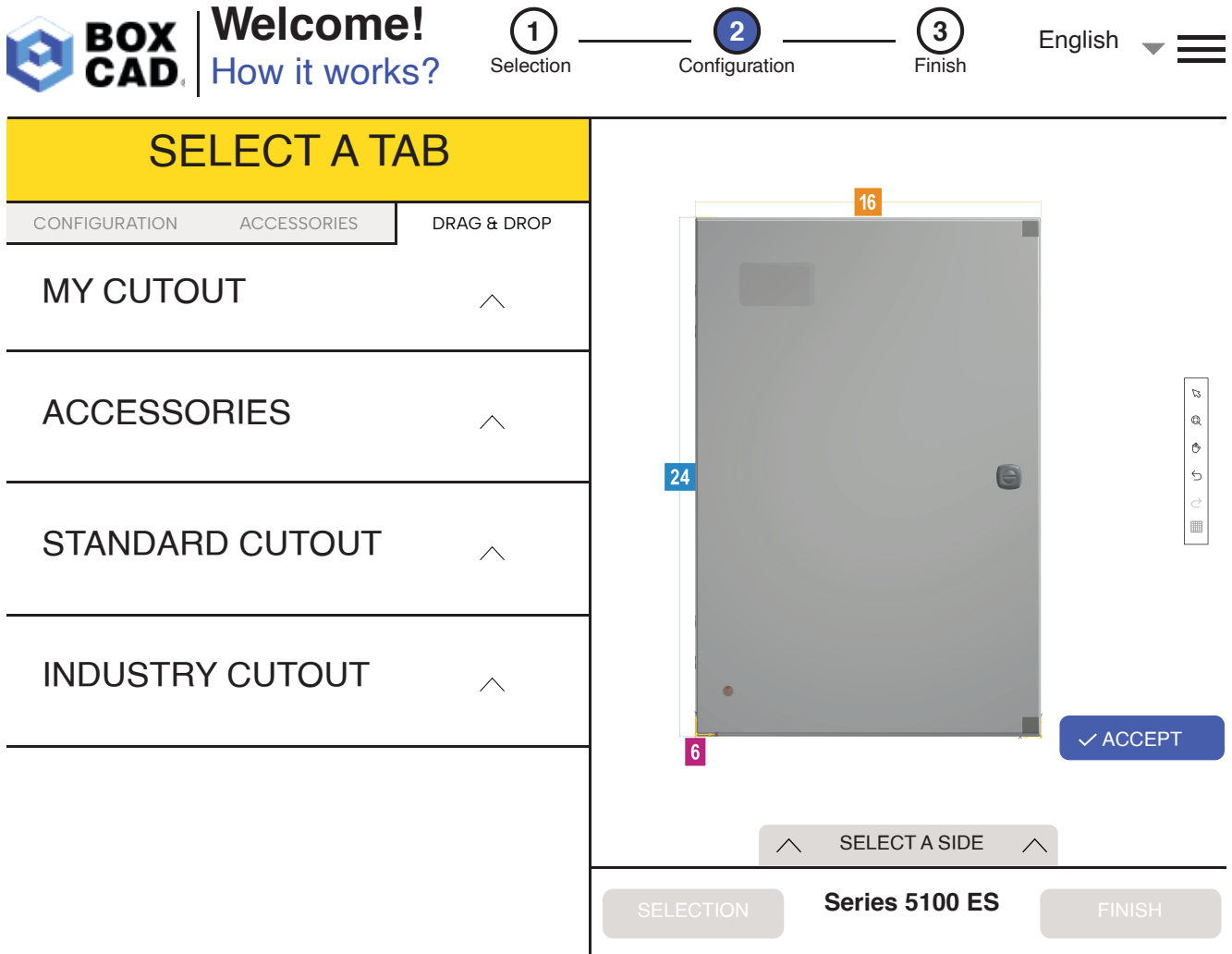
# «INDUSTRY CUTOUTS» MENU

The screenshot displays the BOX CAD software interface. At the top left is the BOX CAD logo and a 'Welcome! How it works?' message. A progress bar shows three steps: 1 Selection, 2 Configuration, and 3 Finish. The language is set to English. The main interface is divided into two panels. The left panel, titled 'SELECT A TAB', has three tabs: 'CONFIGURATION', 'ACCESSORIES', and 'DRAG & DROP'. Under 'INDUSTRY CUTOUT', there are three expandable categories: 'Allen Bradley', 'Panel View', and 'Standard Terminals'. Under 'Standard Terminals', three part numbers are listed with their respective cutout icons: 2711-M3A, 2711-K3A, and 2711-K5A. The right panel shows a 3D model of a grey panel with a cutout. Dimensions are indicated: 16 (width), 24 (height), and 6 (cutout width). A blue 'ACCEPT' button is visible. At the bottom, there is a 'SELECT A SIDE' button and a 'Series 5100 ES' label. Navigation buttons for 'SELECTION', 'FINISH', and 'ACCEPT' are also present.

The industry cutouts allow you to simply select a component's part number and position the required cutouts in place. Industry cutouts allow the installation of components from different manufacturers.

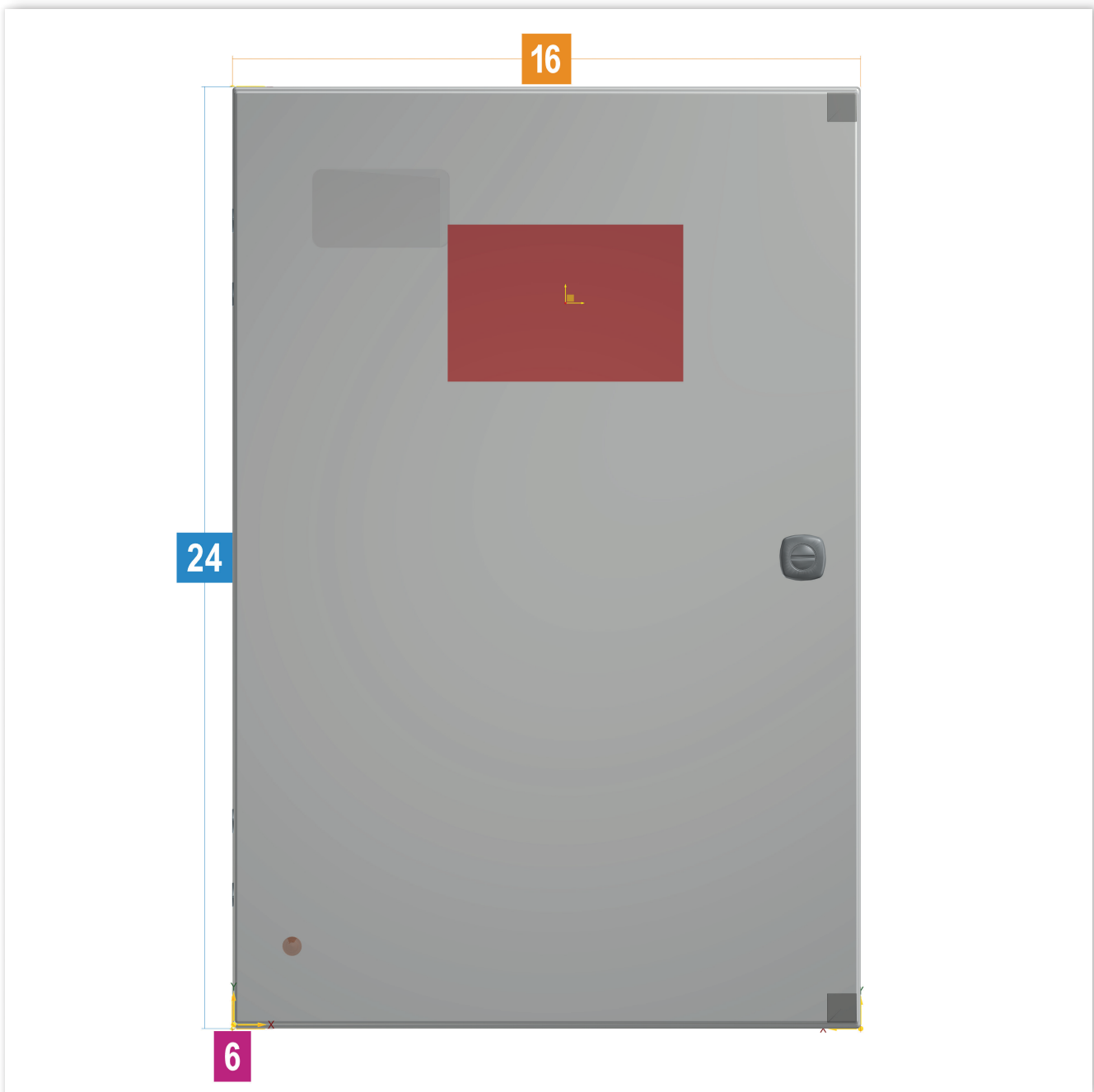
The industry cutouts form take into account the space required for the component that will be installed.

# « CLIENT » SUB-MENU



Access your BOXCAD profile-specific menu. Ask the BOXCAD team to add accessories and patterns you frequently use directly in a sub-menu with your company logo and name.

# OBSTRUCTED ZONES



The Drag & Drop interface displays obstructed areas. These represent different characteristics of the enclosure such as the location of locks or grounding studs.



# SAVE TOOL

*It is possible to save your BOXCAD projects. This way, you will be able to find your projects next time you login to your BOXCAD account. The saved configuration will automatically be added to your existing projects.*

*A generic identification number can be used, you can however use a custom identification number to meet your specific needs.*

# VALIDATION OF MODIFICATIONS

When the modifications are completed, a configuration validation will be performed by BOXCAD. This validation avoids errors by validating the position of the holes and accessories.

## 1. FORCE THE ACCEPTANCE OF A MODIFICATION

Changes can always be manually validated when they are not accepted by the BOXCAD validation process.

## 2. SUMMARY OF MODIFICATIONS

Would you like to create the configuration ID number?

Accessory	Type	Face	X position	Y position	Welding	Cut	Depth	F	G	H	K	Unit	
Accessory	LABEL_EXM	Door	3.75	20.803	Inside	0	0	0	0	0	0	in	×
Ground	M6X16mm	Door	1.486	2	Inside	0	0	0	0	0	0	in	×
Standard Shape	Round	Back	0.75	0.75		0	0	0.39	0	0	0	in	×
Standard Shape	Round	Back	0.75	23.25		0	0	0.39	0	0	0	in	×
Standard Shape	Round	Back	15.25	23.25		0	0	0.39	0	0	0	in	×
Locks	880 SCQ4-SL	Door	14.494	11.902		0	0	0	0	0	0	in	×
Standard Shape	Rectangle	Door	8.45	18.388		0	0.394	6	4	0	0	in	×

The summary of modifications allows you to view all additions made to your EXM enclosure. This summary will be available on your BOXCAD configuration .pdf drawing.







# **BOXCAD®**

## **REVIEW MENU**

---

*Review and complete your **BOXCAD** configuration.*

***YOUR BOXCAD CONFIGURATION  
IS NOW COMPLETED.***

***THE REVISION PROCESS  
OFFERS A GLOBAL PREVIEW  
OF YOUR DESIGN.***

# CONFIGURATION OVERVIEW



Welcome!  
How it works?

①  
Selection

②  
Configuration

③  
Finish

English ▾ ≡

---

## Finish your configuration

### Enclosure specifications

Family

Product #

NEMA

Cut-outs

Dimensions

Hinge Side

Accessories

Primer

Enclosure Material

Color

Finish

---

### Inner Panel Specifications

Dimensions

Hinge Side

Accessories

Primer

---

### Door Specifications

Door Stiffener

Handle Type

---

This summary allows you to quickly view the choices and options relative to your BOXCAD configuration.

## REPRODUCE A NEW CONFIGURATION

When making a change to an existing configuration, it is also possible to save this configuration with a new identification number while retaining the original product number in your directory.

# QUOTATION

Would you like to modify the default quantity per release for the quotation?

Yes  No

Quantity per release for quotation #1    Quantity per release for quotation #2    Quantity per release for quotation #3

By default, BOXCAD offers three levels of quotation (1, 10, and 100). These levels can be changed.

## IDENTIFICATION OF THE CONFIGURATION

Would you like to create the configuration ID number?

No  Custom

1.

Configuration ID number

2.

1. A generic number will identify the BOXCAD configuration throughout the sales process. The identification number will be present on your BOXCAD quotation and should be used to place your order. The custom enclosure packaging will also be labelled with its specific ID number in order to facilitate receiving and inventory of different custom enclosures.

2. The part number of the configuration can be specified. Up to 20 characters can be used to identify your configuration.

Note that special characters are not recognized.

(/ \ ; : é à etc.)

Name it with: job site location, inventory location, job name, e.t.c.

# COMPLETING THE CONFIGURATION

At this stage, the BOXCAD setup is complete. The drawings and quotation will be provided as a compressed (.zip) file to the email address associated with your BOXCAD account.

- ▶ It is possible to complete the configuration and to quit BOXCAD.
- ▶ You can also opt to complete the current configuration and start a new project.



[Close](#) ×



Thank you for using our services, your configuration has been saved.

**Configuration ID:** 24-160829

Should you require to edit or reload this request simply go to **"Configurations History"** in your BoxCad session and reload the ID number.

Your deliverances will be sent at [boxcad@exmweb.com](mailto:boxcad@exmweb.com) shortly.

If the email or files are not available within one working day, please contact our BoxCad administrator via email at: [boxcad@exmweb.com](mailto:boxcad@exmweb.com)

OK

**As a preventive measure, if the browser is closed at this stage, your configuration will be automatically saved to your projects.**





# BOXCAD®

## EXERCISE

---

*Create your BOXCAD configuration by following the instructions.*

***TRY TO GET THE SAME RESULT  
BY BUILDING THIS BOXCAD  
CONFIGURATION YOURSELF,  
FOLLOW THE DIRECTIONS AND  
THE PROVIDED SKETCHES:***



**1. SELECT SIZE:**

**42.7 x 31 x 23 inches | NEMA 4-12**

**2. SELECT COLOR:**

**RAL5015**

**3. SELECT PAINT FINISH:**

**Textured**

**4. SELECT INNER PANEL MATERIAL:**

**Galvanized steel**

**5. SELECT TYPE OF HANDLE:**

**Stainless steel key handle with padlock provision**

**6. ADDITION OF A SWING-OUT PANEL:**

**3 inches from the door**

**7. ADDITION OF EYEBOLTS:**

**Plated steel**

**8. ADDITION OF 2 WALL MOUNTING FEET :**

**885 ESMF1-closed, positioned 7 inches from the respective ends, welded**

## 9. DOOR:

- Add a custom hinge window kit, open box face
  - Add cutouts for 22.5mm push buttons
  - Add an air grill with filter, 880 GPI50
- Move the location of the CSA/UL sticker to the bottom left
  - Move the ground stud

## 10. ADDITION OF 6 INCHES MOUNTING FEET UNDER THE CABINET:

**Right foot:** Addition of an oblong cutout

**Left foot:** Additions of 2 inches round cutouts

## 11. RIGHT SIDE:

- Add a vertical slim mount air conditioning unit, 1200 BTU-120Volts, NEMA 12

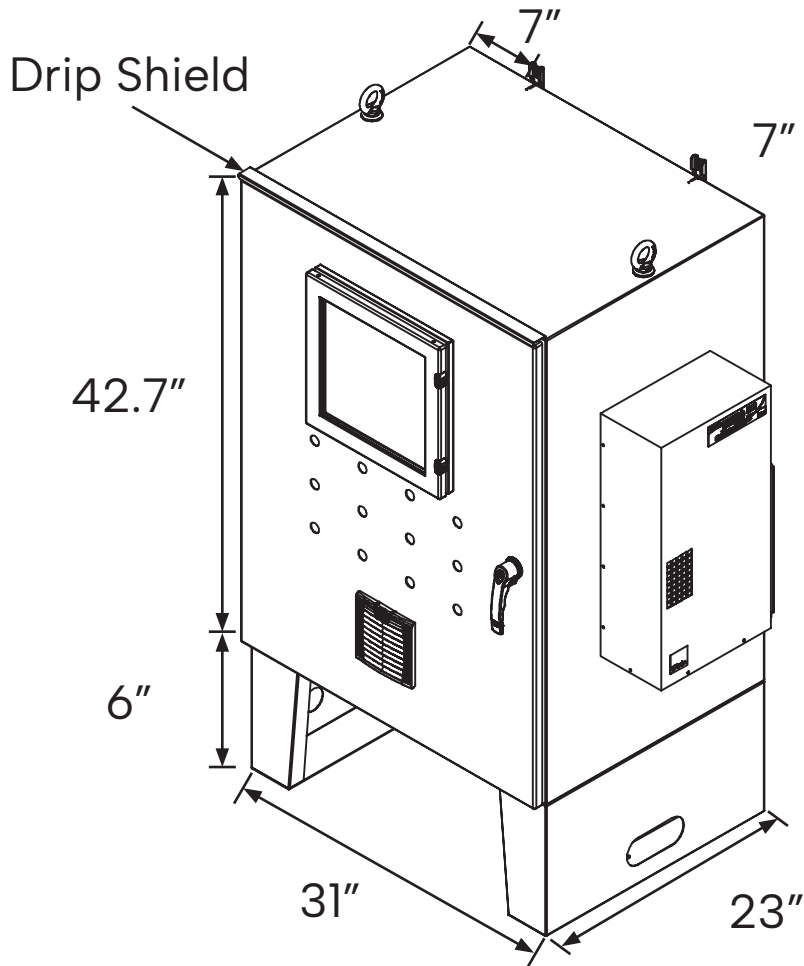
## 12. SWING-OUT PANEL:

- Add a custom window kit
  - Add knockouts

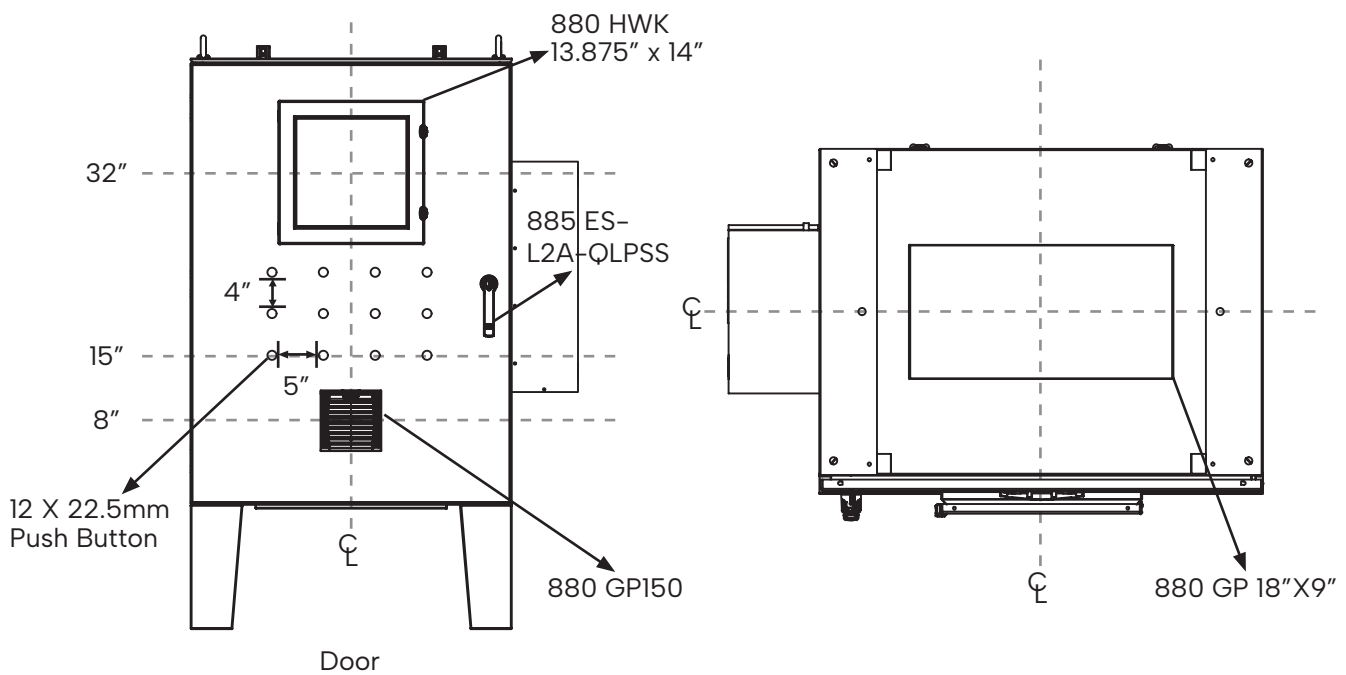
## 13. INNER PANEL:

- Add pattern 001 cutouts
- Add masking tape, outside

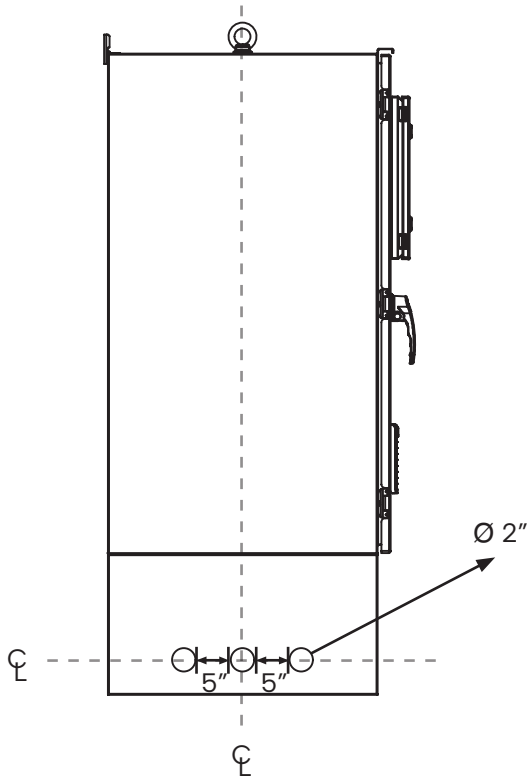
# 14. PROCEED WITH THE CONFIGURATION



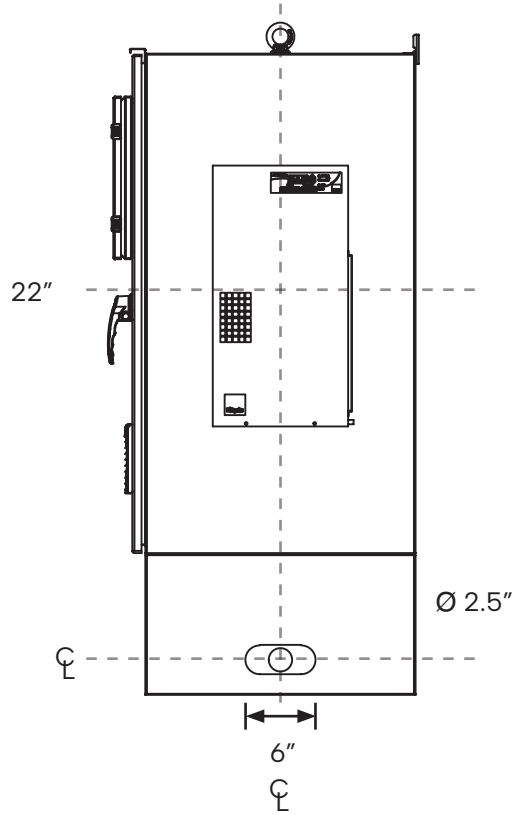
View of the door and bottom:



## View of the right and left sides:

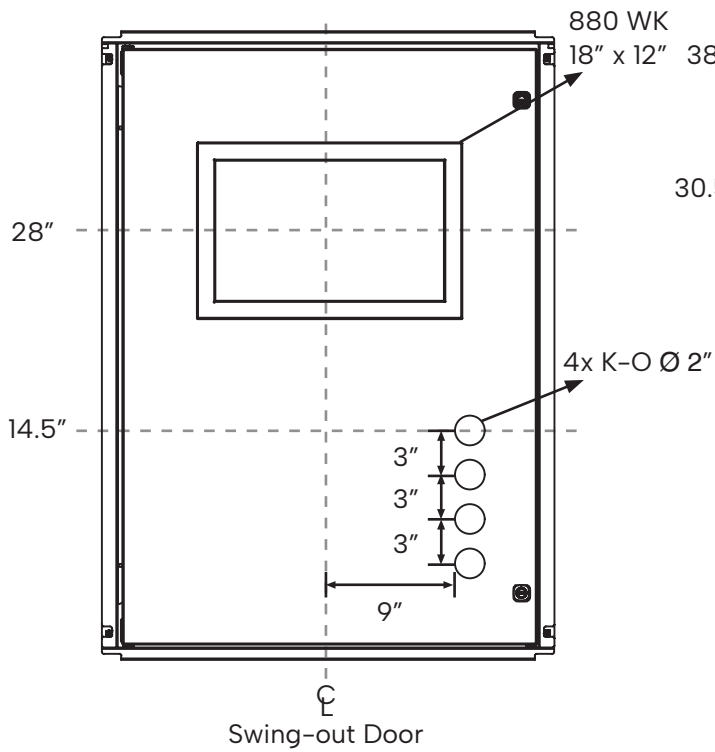


Left Side & Left Mounting Feet



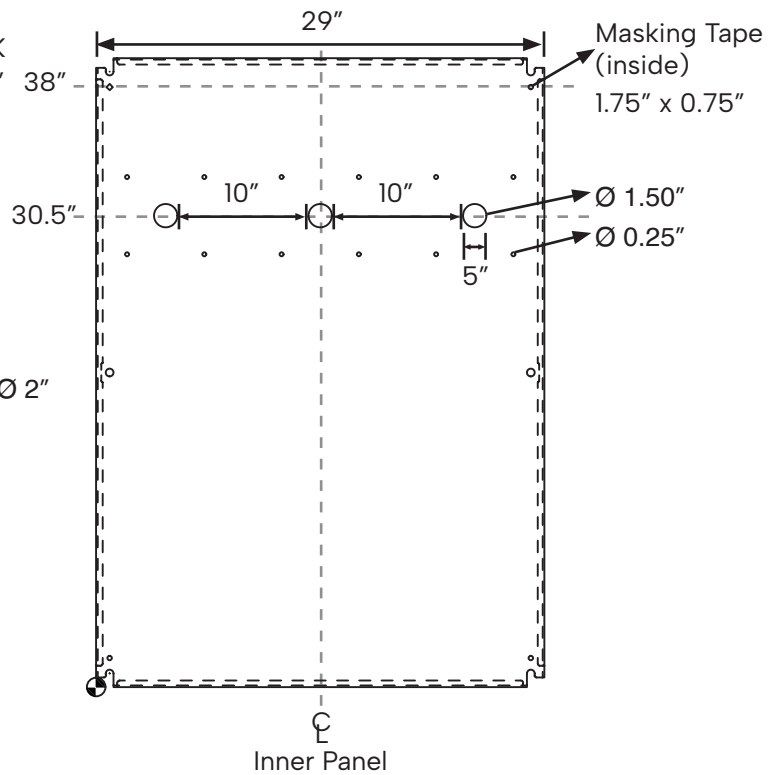
Right Side & Right Mounting Feet

## View of the swing-out door:



Swing-out Door

## View of the inner panel:



Inner Panel



**BOXCAD®**

# RESULTS

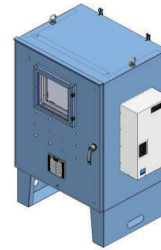
*Review your BOXCAD results.*

***YOU WILL RECEIVE YOUR  
QUOTATION AND  
DRAWINGS BY EMAIL.***

**EXM Manufacturing Ltd**

870 Michele-Bohec  
Blainville, Quebec, Canada  
J7C 5E2  
Tel.: 450 979-4373  
Fax: 450 979-4626

**QUOTATION**



**To:**

**Contact:**

**EXM Manufacturing Ltd.**  
870 Michele-Bohec Boulevard  
Blainville, Quebec, Canada  
J7C 5E2

**Administrator**  
Tel.: 450-979-4373  
Fax: 450-979-4626  
[jean-francois.hebert@exmweb.com](mailto:jean-francois.hebert@exmweb.com)

[View in 3D](#)

Quote no.	Territory	Date	Expiration
<b>Handbook-StefanoGM-REV1-1</b>	<b>Quebec</b>	4-Jul-2024	4-Aug-2024

Quantity	Product No.	Description	Unit list price	Amount
1	Handbook-StefanoGM	5412ES 42.7" x 31" x 23" Enclosure (NEMA 4/12) Material: Mild Steel Color: Sky Blue RAL5015 Finish: Smooth c/w: 25 Cut-outs c/w: 4 Mild Steel Studs c/w: 2 Mild Steel Grounds	CAD 1,901.00	CAD 1,901.00
1	Handbook-StefanoGMIP	881 SP 42.7" x 31" Inner Panel Material: Galvanized Steel Color: 9003 Finish: Smooth c/w: 3 Cut-outs	CAD 322.01	CAD 322.01
1	885 ESMF4	Stainless Steel Wall mounting feet (Installed)	CAD 122.52	CAD 122.52
1	Handbook-StefanoGMGP1	Concealed Gland Plate 18.500" x 9.500" Material: Mild Steel Color: Sky Blue RAL5015 Finish: Smooth	CAD 47.97	CAD 47.97
1	Handbook-StefanoGMHWK-1	Hinged Window Kit 13.875" x 14.000" x 1.099" Material: Mild Steel Color: Sky Blue RAL5015 Finish: Smooth	CAD 655.00	CAD 655.00
1	Handbook-StefanoGMMF	Floor Mounting Stands 12" x 23.000" Material: Mild Steel Color: Sky Blue RAL5015 Finish: Smooth	CAD 655.42	CAD 655.42
1	Handbook-StefanoGMSD	Swing-Out Panel 42.700" x 31.000" Material: Mild Steel Color: White RAL9003 Finish: Smooth	CAD 750.90	CAD 750.90
1	880 HGP150	Hinged Small Air Filter Grill - 150mm	CAD 59.04	CAD 59.04
1	TAPE_02	Polyester Masking Tape in Roll	CAD 11.62	CAD 11.62
1	880 EB14SS	SS Eye Bolt M14 (Pack of 2)	CAD 77.81	CAD 77.81
1	Handbook-StefanoGMDS	External Drip Shield 31.000"	CAD 167.59	CAD 167.59

Terms: Net 30 Days  
FOB Our plant  
Tax: Extra

Prices subject to change without notice.

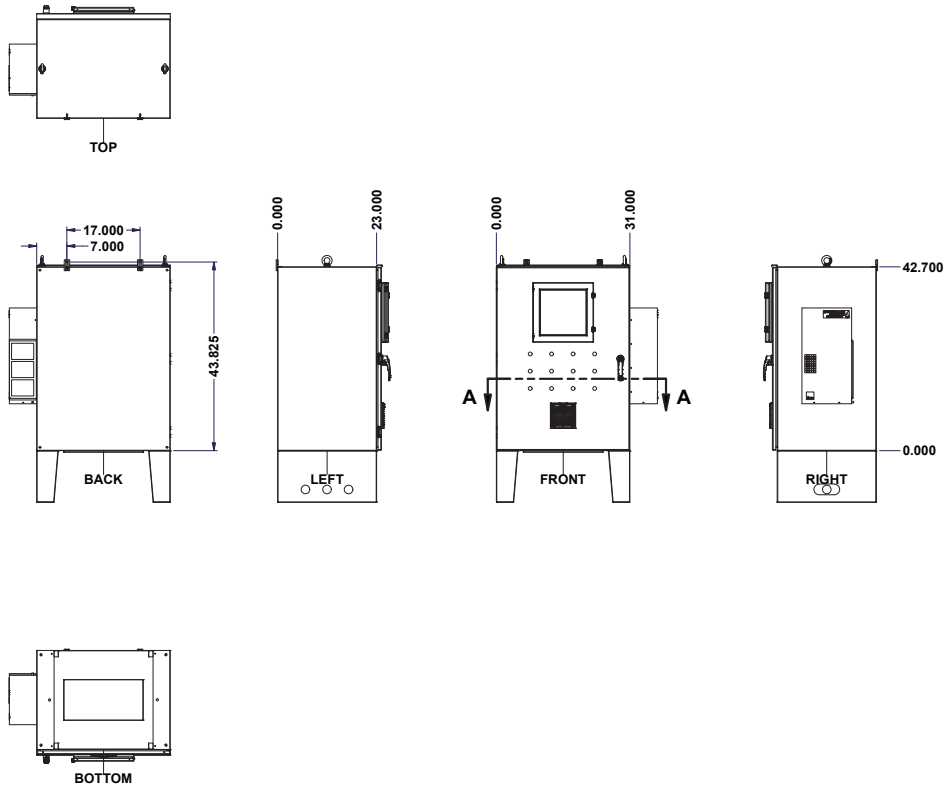


Tolerance ±1/32" unless otherwise specified

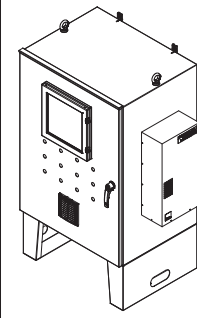
C:\Vault Workspace\Inventor\_Dwg\BoxCad\Result\Handbook-StefanoGM\Handbook-StefanoGM.idw

Tolérance ±1/32" sauf spécification contraire

This drawing is confidential and must not be reproduced or used without the consent of EXM.



No.	Revisions	Date	By/Par
1	Update	08-Mar-24	



Isometric View

		Flatness Apollon May Project
Client Date	BoxCad: Administrator Date: 13/03/24	Tel: (450) 979-4373 Fax: (450) 979-4628 www.exmesb.com
Drawn By Dessiné Par	Material Matière	Finish Fini
Description 5412ES 42.7" x 31" x 23" Assembly	14 Ga Cold Rolled A1008 CS Type B (1.7mm)	Smooth
Part Number Numéro Pièce	Handbook-StefanoGM	Rev. 1 1/22

SEE BILL OF MATERIAL ON LAST PAGE





**BOXCAD®**

**VALUE ADDED  
SERVICES**

*Additional services are provided to complete  
your BOXCAD configuration.*

*SHOULD YOU MAKE IT YOURSELF  
OR OUTSOURCE?*

*WITH THE VALUE ADDED SERVICES  
OFFERED BY EXM, WE ALLOW YOU  
TO SPEND MORE TIME ON YOUR  
CORE CAPABILITY TO FACILITATE  
THE COMPLETION OF  
YOUR PROJECTS.*

# DIGITAL PRINTING SERVICE

**EXM offers the latest technology in printing services, offering high quality printing directly on your electrical enclosure.**

EXM's quality equipment provides superior printing results.

The printing of your graphics is consistent, durable and offers excellent resistance to scratches. Compared to the use of stickers & lamincoids, graphics will be constant on every box.

Printing requires a high-quality image in order to achieve quality results.



# DISCONNECT HANDLE INSTALLATION SERVICE

**EXM now offers the complete installation of through the door disconnects. Simply specify the disconnect kit required and EXM will install it on your enclosure.**

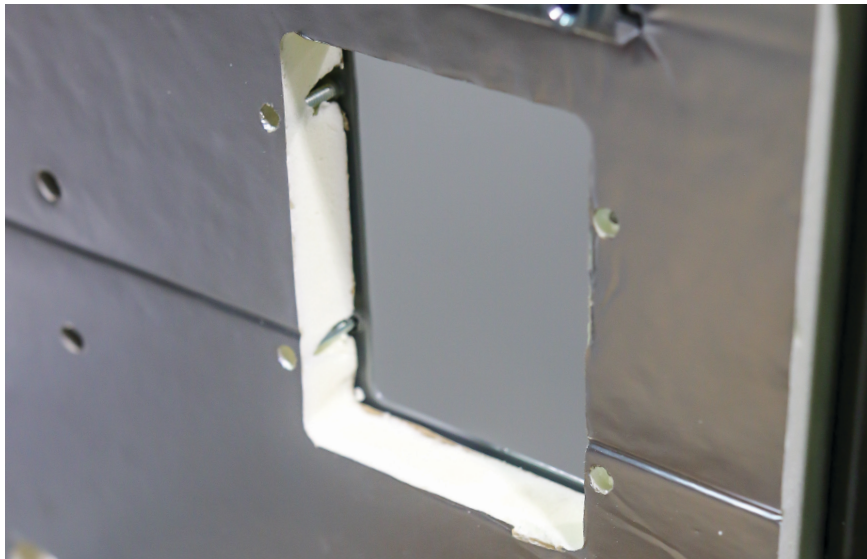
Our team of experienced installers will assemble the disconnect switch on your enclosure's inner panel. EXM will ensure that the holes required on the inner panel are created for a perfect fit. Including the connecting shaft from the door to the disconnect.



# INSTALLATION SERVICE/ADDING INSULATION

**It is possible to add R5 insulation to the vast majority of EXM enclosures. The insulation is cut using a CNC machine, which offers a high level of precision and provides exceptional results.**

Our qualified staff will install the insulation. EXM is proud to offer CSA/UL certified insulated enclosures.



***OUR LARGE PURCHASING POWER  
ALLOWS OUR CUSTOMERS TO GET  
THE BEST PRICES FOR THEIR  
DISCONNECTS, ACCESSORIES ETC.  
RECEIVE YOUR FULLY ASSEMBLED  
ENCLOSURE AT AN UNBEATABLE PRICE.***



# **BOXCAD®**

## **QUESTIONS & ANSWERS**

---

*In this section, we provide answers  
to frequently asked*



***WE EXTEND ALL EFFORTS  
POSSIBLE TO PROVIDE  
THE BEST EXPERIENCE  
FOR BOXCAD USERS.***

***WE ENCOURAGE FEEDBACK  
ON LIKES, DISLIKES,  
NEW CUTOUT PATTERNS,  
NEW ACCESSORIES E.T.C.***

## Why should I use BOXCAD when I already have a CAD software?

BOXCAD makes it easy to design your enclosure and then upload it to your CAD software.

In fact, BOXCAD is a complement to your CAD system. Using the provided .stp file, your BOXCAD configuration can be transferred to your CAD system in a matter of seconds.

## Will my enclosure accessories be installed by EXM?

Accessories are not installed by EXM unless indicated otherwise.

## Will my BOXCAD enclosure follow CSA & UL requirements?

When designing a BOXCAD enclosure, all CSA and UL parameters are taken into consideration by the system. Your BOXCAD enclosure will meet all CSA and UL requirements for the enclosure's design.

## How long could it take to design an enclosure without BOXCAD?

Using BOXCAD, following the exercise on page 70, it may take between 10 and 15 minutes to complete. Without BOXCAD, the same exercise could take hours!



## Can I opt for a 3-point-lock system on my ¼ turn lock enclosure?

It is only possible to add a 3-point-lock system on enclosures with a minimum height of 20 inches (500mm).

## Why are certain accessories highlighted in red?

BOXCAD makes a validation of the interference of the actual accessory's position and physical dimensions in order to avoid any interfering.

## Can I delete cutouts in the Drag & drop by entering «0» in the value menu?

To delete cutouts in the Drag & Drop interface, use the BOXCAD's "delete" tool or «delete» key on your keyboard.

BOXCAD does not run well on my WEB browser.

Empty your web browser's cache folder. Cookies in your browser may affect the proper execution of BOXCAD.

Also be sure to update your Web browser (page 5).

## Is it possible to modify the dimensions of the Inner Panel?

It is possible to do a separate BOXCAD configuration for an inner panel with special dimensions.

By default, BOXCAD offers a full size inner panel designed for the selected enclosure.

## Are the accessories installed on an insulated enclosure?

On enclosures with insulation, most accessories will be installed, since they require modifications to the insulation layer.

## Are the threaded studs free of paint?

The threaded studs will be masked before the painting process ensuring that you will receive threaded studs free of paint.

I have not received my BOXCAD configuration.

Check your email Spam folder, it may be that the BOXCAD email address is not recognized by your email provider or firewall so be sure to add it to your contact list.

## How does the revision process work in BOXCAD?

BOXCAD stores the latest version of your configuration. BOXCAD can be used as a vault to store your enclosure drawings.



**BOXCAD®**

## **FINAL WORD**

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*BOXCAD is the ideal solution for  
custom-made enclosures.*

*WITH MORE AND MORE USERS  
JOINING EACH DAY, BOXCAD  
SEVES A GENUINE INTEREST  
FROM CLIENTS RANGING  
FROM SMALL ENTERPRISES  
TO MULTINATIONALS.*

### DWG's & quote:

Receive all related documents by email

### Time saving:

We will produce your enclosure in 4-6 business days

### Canvas for ideas:

Use BOXCAD to bring ideas to reality

### Your own system:

EXM's fully integrated production system is yours!

### Easy to use:

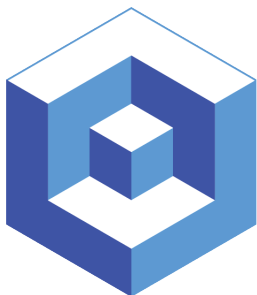
User-friendly interface that complements the BOXCAD experience

### Cost-Effective:

Save on your production cost by reducing labor, let EXM do all the work for you

### Improved efficiency:

Be proactive by designing your projects with BOXCAD



# BOXCAD®



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Ohio

**USA**

Texas

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