

SeT Series

# MCS<sub>e</sub>T

Digitally Native up to 24 kV

Air-insulated Switchgear

With EvoPacT HVX Vacuum Circuit Breaker

## Civil Engineering Guide

BQT8706400-04

01/2026



# Legal Information

The information provided in this document contains general descriptions, technical characteristics and/or recommendations related to products/solutions.

This document is not intended as a substitute for a detailed study or operational and site-specific development or schematic plan. It is not to be used for determining suitability or reliability of the products/solutions for specific user applications. It is the duty of any such user to perform or have any professional expert of its choice (integrator, specifier or the like) perform the appropriate and comprehensive risk analysis, evaluation and testing of the products/solutions with respect to the relevant specific application or use thereof.

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## SeT Series

Featuring outstanding medium-voltage (MV) and low-voltage (LV) switchboards, motor control centres and power distribution solutions for high-performance power applications, Schneider Electric's SeT Series is optimized solutions based on high levels of safety and an optimized footprint. Built on a modular architecture and incorporating smart connected devices for maximum safety, reliability, performance and energy efficiency, the SeT Series is delivered to customers directly from our Schneider Electric plants or via a global network of licensed partner panel builders, who are trained and audited to provide quality equipment and support.

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# Safety Information

## Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.





The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 <b>DANGER</b>
<b>DANGER</b> indicates a hazardous situation which, if not avoided, <b>will result in</b> death or serious injury.

 <b>WARNING</b>
<b>WARNING</b> indicates a hazardous situation which, if not avoided, <b>could result in</b> death or serious injury.

 <b>CAUTION</b>
<b>CAUTION</b> indicates a hazardous situation which, if not avoided, <b>could result in</b> minor or moderate injury.

<b>NOTICE</b>
<b>NOTICE</b> is used to address practices not related to physical injury.

## Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

## Safety Precautions

### Safety Rules

#### **DANGER**

##### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate Personal Protective Equipment (PPE) and follow safe electrical work practices. See standards or local equivalent.
- This EvoPacT HVX Vacuum Circuit Breaker and the MCSeT equipment must only be installed and serviced by qualified electrical personnel.
- Perform work only after reading and understanding all of the instructions contained in this guide.
- Turn off all the power sources before working on or inside the equipment.
- Turn off or trip the Vacuum Circuit Breaker (VCB) and discharge the mechanism.
- Always use a properly calibrated voltage sensing device to confirm power is off.
- Use only Schneider Electric specific tools (operating crank, extraction table, and so on).
- Check all devices, covers, and doors are in correct position before turning on the power.
- Beware of potential hazards and carefully inspect the work area for tools and objects that may have been left inside the equipment.
- Do not modify the mechanical or electrical parts.
- Do not bypass the interlocks before operation.
- Do not operate with protective barriers removed.

**Failure to follow these instructions will result in death or serious injury.**

#### **NOTICE**

##### **HAZARD OF INAPPROPRIATE HANDLING AND STORING UNDER INADEQUATE CONDITIONS**

- Comply with the handling rules and avoid causing any shocks to the device.
- If the equipment is stored before its final installation, observe the storage conditions.

**Failure to follow these instructions can result in equipment damage.**

### Cleaning Instructions

#### **DANGER**

##### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Do not use solvents or alcohol for cleaning the equipment.
- Do not use high-pressure cleaner for cleaning the equipment.

**Failure to follow these instructions will result in death or serious injury.**

# About the Document

## Document Scope

This civil engineering guide describes about air-insulated MV switchgear units of the MCSeT.

The operations described in this guide should be performed by a qualified personnel with proven experience regarding:

- The MCSeT series
- All relevant safety provisions

This civil engineering guide is the integral part of the product and should be stored such that it is readily accessible at all times and can be used by persons who work on the switchgear. If the switchgear is relocated to another site, this guide should be passed on to the new operator along with the unit.

This guide does not describe every imaginable individual case or every customer-specific version of the product. For more information that is not included in this guide, contact Schneider Electric.

## Validity Note

This guide is valid only for MCSeT cubicle. The design provides easy rack-in/rack-out operation without the need for a separate trolley. This MCSeT cubicle is an extension of the MCSeT range and delivers performances up to 24 kV, equipped with EvoPacT HVX VCB and CVX Contactor. It also has other functional trolley like the EvoPacT Metering Truck (MTX).

For product compliance and environmental information (RoHS, REACH, PEP, EOLI, and so on), go to the [Green Premium](#) page on the Schneider Electric website.

The information contained in this guide is likely to be updated at any time. Schneider Electric strongly recommends that you have the most recent and up-to-date version available on [www.se.com/ww/en/download](http://www.se.com/ww/en/download).

The technical characteristics of the devices described in this guide also appear online. To access the information online, go to the Schneider Electric home page at [www.se.com](http://www.se.com).

## Product Related Information

Air-insulated MV switchgear units of the MCSeT series are designed exclusively for switching and distributing electrical power.

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

The MCSeT switchgear must be used only in scope of specified standards and specific technical data.

**Failure to follow these instructions will result in death or serious injury.**

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## General Cybersecurity Information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the [Cybersecurity Best Practices](#) document.

Schneider Electric provides additional information and assistance:

- [Subscribe to the Schneider Electric security newsletter.](#)
- [Visit the Cybersecurity Support Portal web page to:](#)
  - [Find Security Notifications.](#)
  - [Report vulnerabilities and incidents.](#)
- [Visit the Schneider Electric Cybersecurity and Data Protection Posture web page to:](#)
  - [Access the cybersecurity posture.](#)
  - [Learn more about cybersecurity in the cybersecurity academy.](#)
  - [Explore the cybersecurity services from Schneider Electric.](#)

## Information on Non-Inclusive or Insensitive Terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

## Queries

For any questions, suggestions, or need of further information about this guide, contact Schneider Electric. For additional details, visit our website [www.se.com](http://www.se.com).

For details of MCSeT switchgear expansion (either right or left side), it is recommended to contact Schneider Electric.

We always strive to provide you with the best-possible information for optimum, safe use of our products. Contact Schneider Electric if you have any recommendations, amendments, or proposals for improvement.

# Safety Provisions

Before performing work on the cubicle, it is essential that you comply with the following instructions:

<b>⚡⚠ DANGER</b>
<b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH</b>
Before removing covers and performing assembly or maintenance work:
<ul style="list-style-type: none"><li>• Ensure that the system is isolated from high voltage, supply voltage, and properly grounded.</li><li>• Ensure that the VCB/Contactor is in test condition, the Earthing Switch (E/S) is closed, and access is locked.</li><li>• Follow the Lock Out Tag Out (LOTO) process to perform any work on switchboard.</li><li>• Install barriers, cables, and polycarbonates in accordance with the design specifications wherever necessary.</li></ul>
<b>Failure to follow these instructions will result in death or serious injury.</b>

<b>⚠ WARNING</b>
<b>HAZARD OF MOVING PARTS IN MECHANICAL DRIVES</b>
Before performing mounting and maintenance work, comply with the below safety rules:
<ul style="list-style-type: none"><li>• Isolate from the supply voltage.</li><li>• Release the energy-storing device of the VCB by performing the OFF-ON-OFF operation.</li><li>• Activate the make-proof E/S to ON position, to ensure that the equipment is ready for use (if any).</li><li>• Do not remove the mechanisms during maintenance work.</li></ul>
<b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>

<b>⚠ WARNING</b>
<b>HAZARD OF SHARP-EDGED SHEET METAL AND METAL PARTS</b>
During installation and maintenance work, comply with the below safety rules:
<ul style="list-style-type: none"><li>• Apply appropriate PPE and follow safe electrical work practices. See standards or local equivalent.</li><li>• Always cover sharp edges.</li></ul>
<b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>

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## Applicable Standards and Regulations

The applicable standards and regulations are as follows:

- Metal-enclosed AC switchgear for rated voltages > 1 kV up to including 52 kV: IEC 62271-200, Common specification: IEC 62271-1.
- The locally applicable accident prevention, operating and work instructions should be complied.
- Assembly and maintenance: IEC 61936-1.
- Operation of electrical equipment: EN 50110-1.

**NOTE:**

- The national standards applicable in the country where the equipment is to be installed should be complied.
- Other standards or regulations have to be checked and accessed locally.

## Behavior in case of Incidents or Accidents

If an internal arc fault occurs, the MCSeT switchgear is equipped with pressure relief absorbers or ports to help prevent the cubicles and switchgear from being blown off.

This civil engineering guide does not include information regarding the safety of buildings in case of internal faults (pressure load of the switchgear room and necessary pressure relief ports). Pressure calculations for switchgear rooms, including recommendations for pressure relief ports, are available upon request for a fee. For more details, contact Schneider Electric.

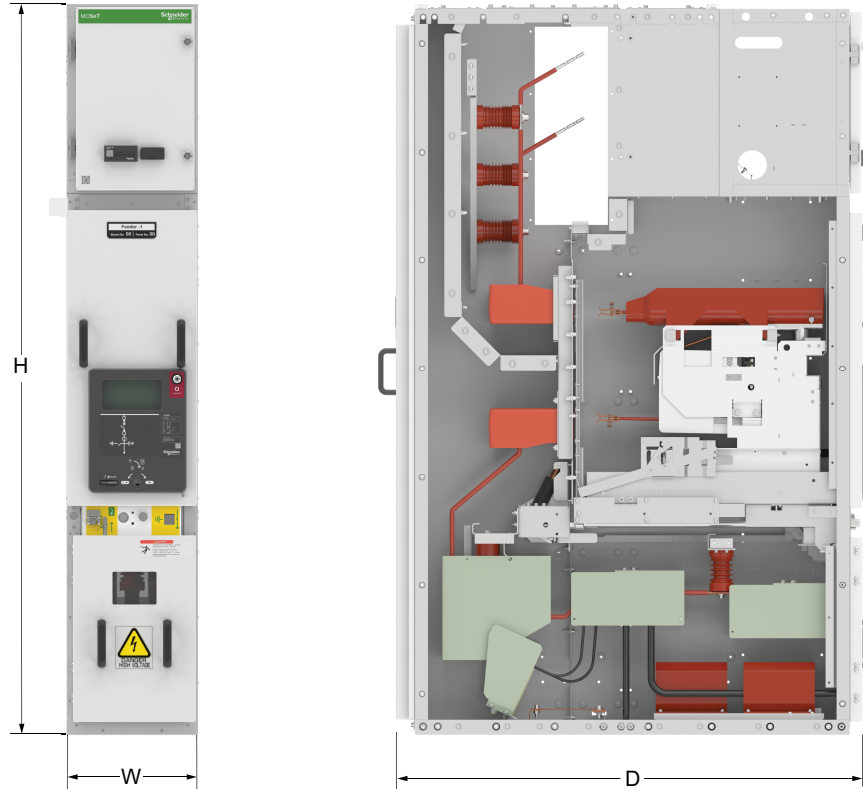
In case of fire or internal faults, toxic and caustic decomposition products are produced. Comply with the locally applicable accident and safety provisions.

Make sure that the first-aid measures are taken in case of injury to persons.

# Dimensions and Weights

## Feeder with Contactor Cubicle (FC)

Feeder with contactor cubicle are available with a maximum rated voltage of 12 kV.



**Figure 1**  
Feeder with Contactor (FC)

**Table 1 Dimension of Feeder**

Rated voltage (kV)	Dimensions	
	7.2/12	Width W (mm)
Height H (mm) <sup>(1)</sup>		2240
Depth D (mm)		1440
Approximate weight with packing (kg) <sup>(2)</sup>		1180
Approximate weight without packing (kg)		530

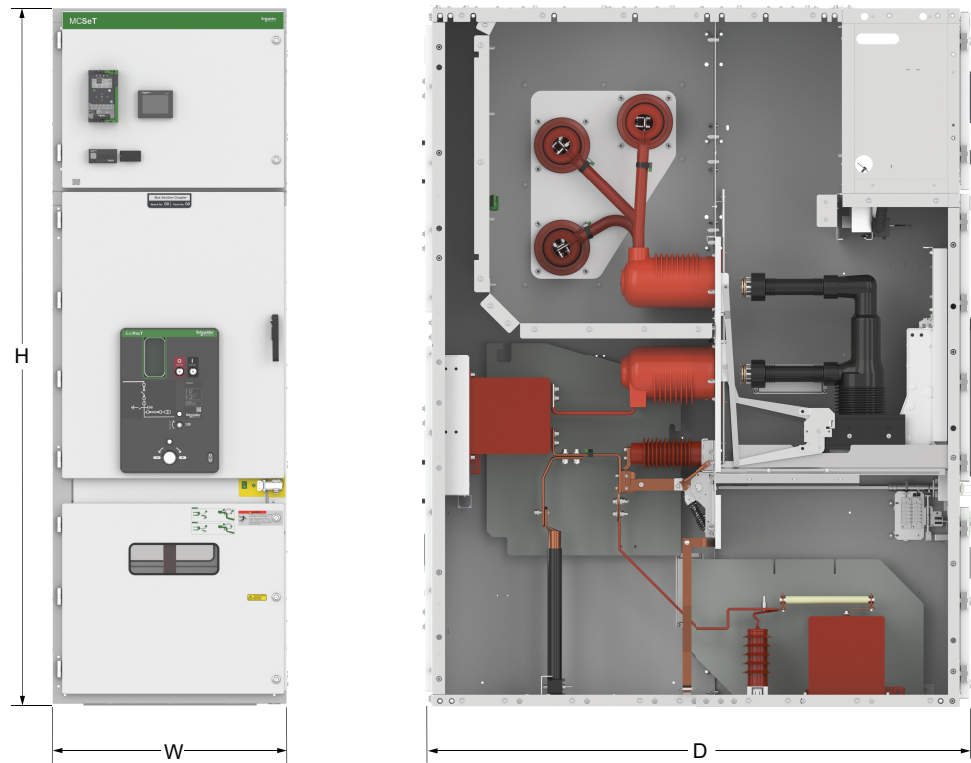
<sup>(1)</sup> The specified height covers standard LV compartment and does not include internal arc accessories.

<sup>(2)</sup> The packaged weight includes two coupled cubicles.

## Cubicles without Internal Arc Accessories

The list of cubicles with one Current Transformer (CT) per phase in the MCSeT are:

- Incomer/Feeder (I/F)
- Bus Section Coupler (BSC)
- Bus Section Riser (BSR)
- Busbar Metering and Earthing (BME)



**Figure 2**  
Dimensions of Cubicles

**NOTE:** The images shown here are for illustration purpose only.

**Table 2 Dimensions of I/F, BSC, BSR, and BME Cubicles**

Rated voltage (kV)	Dimensions	I/F			BSC			BSR			BME		
	Width W (mm)	650	800	1000	650	800	1000	650	800	1000	650	800	1000
12/17.5	Height H (mm) <sup>(1)</sup>	2240	2240	2240	2240	2240	2240	2240	2240	2240	2240	2240	–
	Depth D (mm) <sup>(2)</sup>	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	–
	Approximate weight with packing (kg) <sup>(3)</sup>	800	920	1050	720	840	970	480	630	750	470	720	–
	Approximate weight without packing (kg) <sup>(3)</sup>	700	820	950	620	740	870	380	530	650	350	620	–
24	Height H (mm) <sup>(1)</sup>	–	2400	2400	–	2400	2400	–	2400	2400	–	2400	2400
	Depth D (mm) <sup>(2)</sup>	–	1860	1860	–	1860	1860	–	1860	1860	–	1860	1860
	Approximate weight with packing (kg) <sup>(3)</sup>	–	1160	1470	–	1190	1510	–	800	1030	–	765	980
	Approximate weight without packing (kg) <sup>(3)</sup>	–	1020	1330	–	1120	1440	–	730	960	–	700	910
<p><sup>(1)</sup> The specified height covers standard LV compartment and does not include internal arc accessories.</p> <p><sup>(2)</sup> The mentioned depth refer to a single CT with bottom cable entry; it may differ for other designs.</p> <p><sup>(3)</sup> Fully equipped cubicle with surge arrester and fixed Voltage Transformer (VT).</p>													
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>For a 4000 A cubicle with a width of 1000 mm, the depth is 1640 mm.</li> <li>All weights mentioned in this document may vary. The actual weights are specified on the cubicle packaging.</li> </ul>													

# Switchboard Tunnel

## Switchboard with Internal Arc Accessories

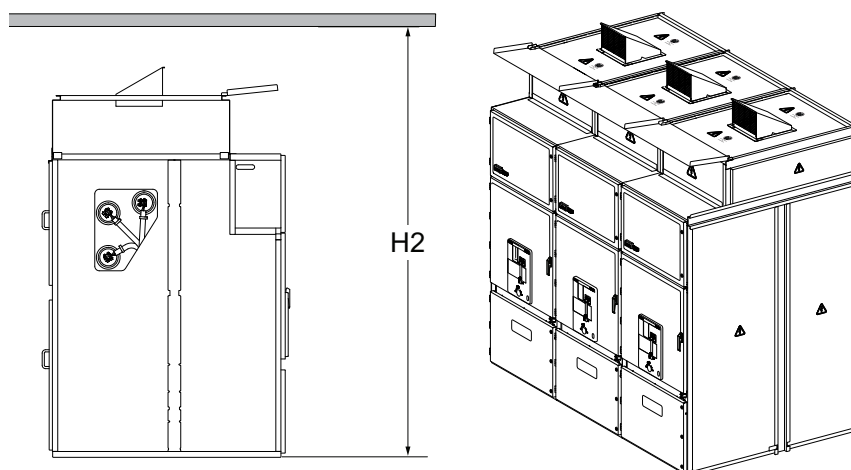
### ⚡⚠ DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Do not step on the switchboard roof to access the device and avoid installing any devices such as lamps above the switchboard.
- Ensure to maintain Schneider recommended minimum ceiling height for internal and external exhaust. For details, refer to Figure 2, Figure 3, Figure 4 and Figure 5.

**Failure to follow these instructions will result in death or serious injury.**

## Recommendations

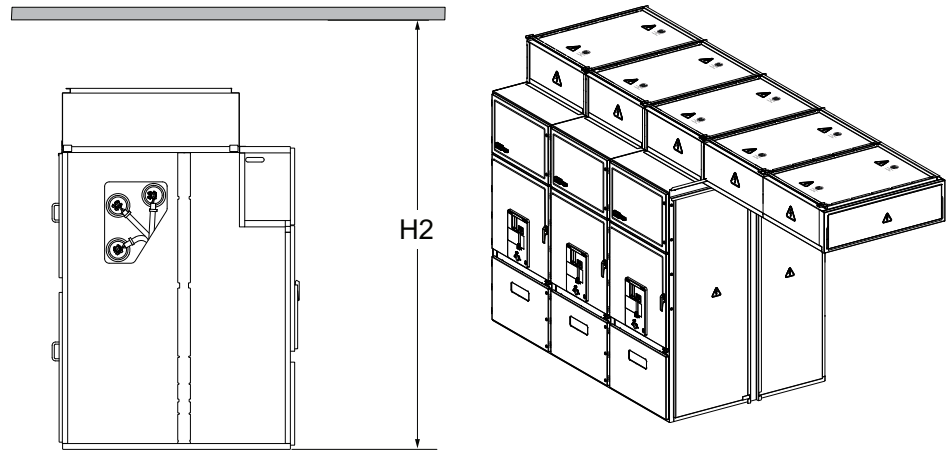


**Figure 3**  
Ceiling Height for Internal Exhaust

**NOTE:** The images shown here are for illustration purpose only.

**Table 3 Ceiling Height for Internal Exhaust**

Rated voltage (kV)	Ceiling height H2 (mm)
7.2/12/17.5	3400
24	3500

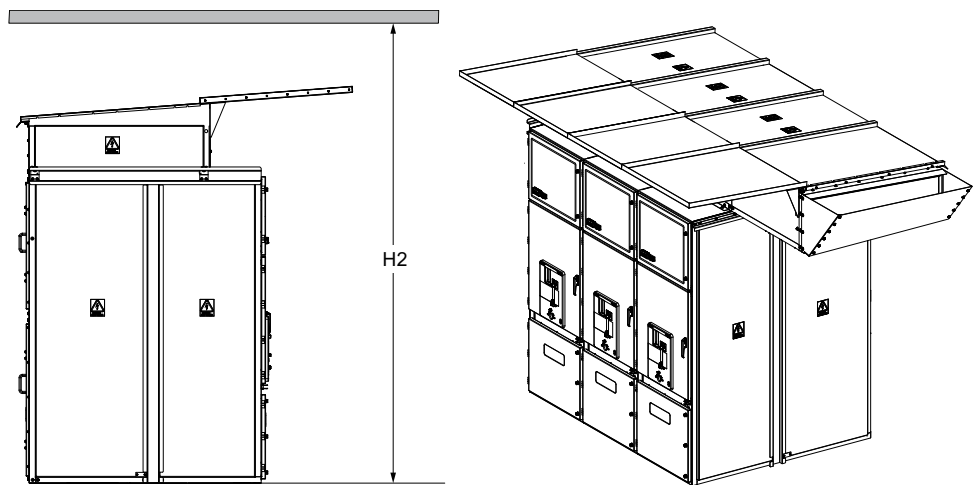


**Figure 4**  
Ceiling Height for External Exhaust 7.2/12/17.5 kV

**NOTE:** The images shown here are for illustration purpose only.

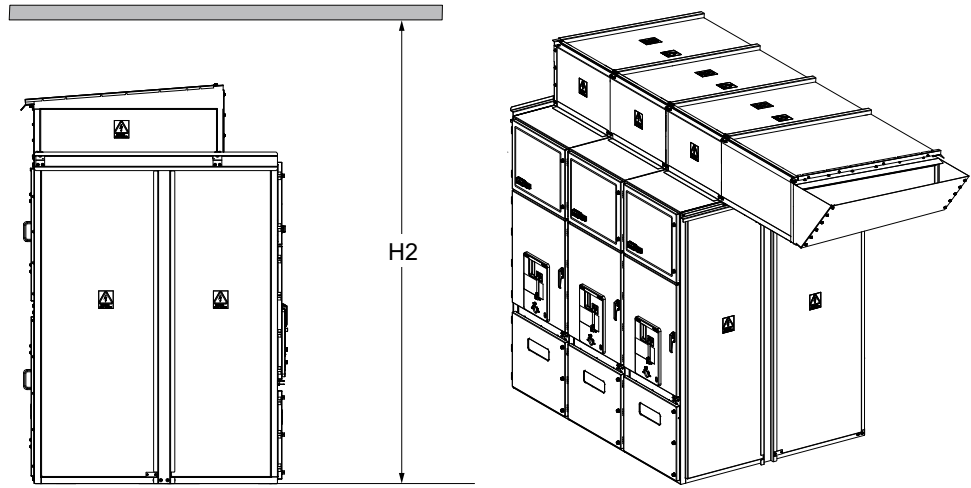
**Table 4 Ceiling Height for External Exhaust 7.2/12/17.5 kV**

Rated voltage (kV)	Ceiling height H2 (mm)
7.2/12/17.5	3000



**Figure 5**  
Ceiling Height for IP 41/42 External Exhaust 24 kV

**NOTE:** The images shown here are for illustration purpose only.



**Figure 6**  
Ceiling Height for IP 4X External Exhaust 24 kV

**NOTE:** The images shown here are for illustration purpose only.

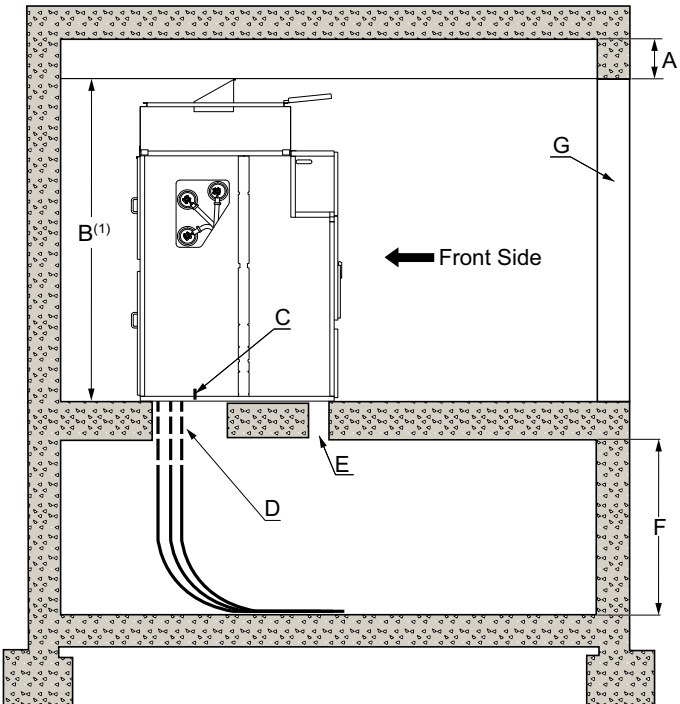
**Table 5 Ceiling Height for External Exhaust 24 kV**

External Exhaust	Ceiling height H2 (mm)
IP 41/42	3280
IP 4X	3150

# Switchboard Spacing

<b>⚠ CAUTION</b>
<b>HAZARD OF INCORRECT DIMENSIONS</b>
Adhere to the specified spacing dimensions of the switchboard mentioned in Civil Engineering with Maintenance Space/Cable Trench, page 17.
<b>Failure to follow these instructions can result in injury or equipment damage.</b>

## Civil Engineering with Maintenance Space/Cable Trench



**Figure 7**  
Civil Engineering with Maintenance Space/Cable Trench

A This space should remain clear to allow for the opening of the gas exhaust outlets in the event of internal arcing. Do not keep any devices in this zone (lights, equipment storage, cable tray, air condition duct, beam, and so on). It is also the location for the installation of the tunnel.

Cubicle	Dimension A (mm)	
	7.2/12/17.5 kV	24 kV
External exhaust	200	200
Internal exhaust	420	430

B Total height of the cubicle height with internal exhaust/external exhaust.

Cubicle	Dimension B (mm)		
	7.2/12/17.5 kV	24 kV	
	IP4X	IP41/42	IP4X
External exhaust	2710	3080	2950
Internal exhaust	2970	3140	3070

C Main earthing bar.

- D Reserved slab space for routing the MV cables.
- E Reserved slab space for routing of LV cables.
- F The height of the cable trench should be kept in line with the cable's bending radius, as outlined in the supplier's catalog.
- G Access to room.

<sup>(1)</sup> Minimum dimensions to be complied with when installing the MCS<sub>e</sub>T switchboard with minimum LV box height.

**NOTE:**

- The depth of the maintenance space should be equal to the bending radius of the cables being used. This helps to prevent cables from experiencing undue stress.
- To place the ramp and remove the withdrawable VT (WVT) from the front side, a minimum of 2000 mm of space is required.

# Spacing Around the Switchboard

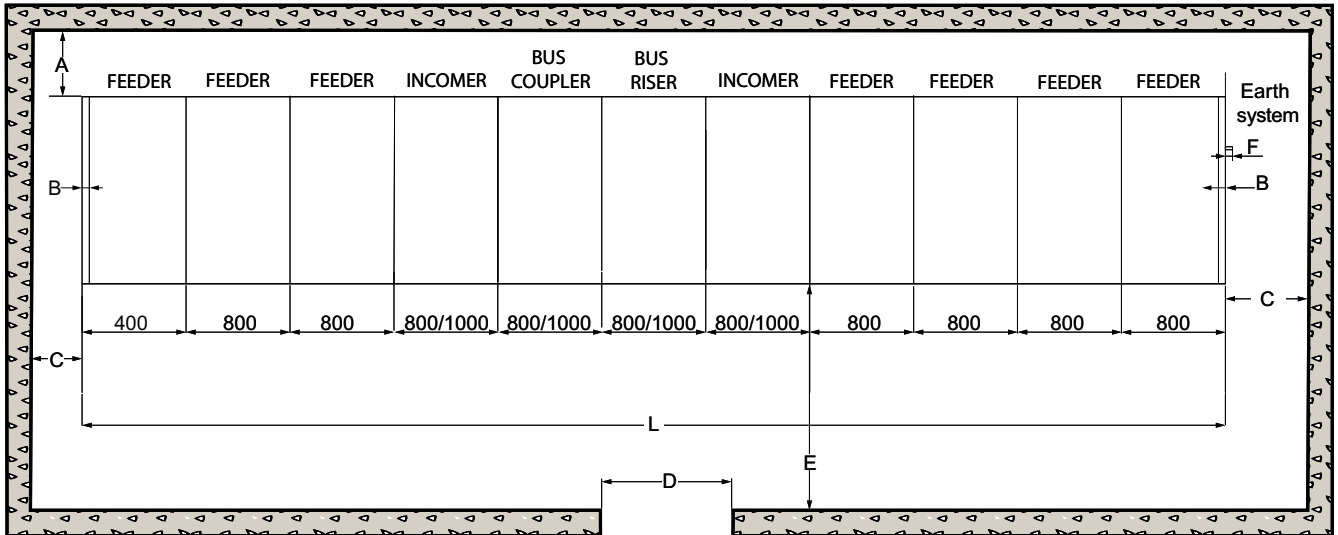
**⚠ CAUTION**

**HAZARD OF INCORRECT DIMENSIONS**

Adhere to the specified spacing dimensions around the switchboard, refer to Figure 5.

**Failure to follow these instructions can result in injury or equipment damage.**

Top view of the switchboard



**Figure 8**  
Top View of the Switchboard and Surrounding Spacing

The L dimension depends on the cubicles of the switchboard.

- A: This dimension should be equal to:
- 200 mm for AFL (Accessibility Front Lateral) type of cubicle.
  - Minimum 800 mm for AFLR (Accessibility Front Lateral Rear) type of cubicle.

B: 35 mm end cover.

C: Should be 800 mm for lateral access & 500 mm if no access.

D: Minimum 1200 mm for opening the door.

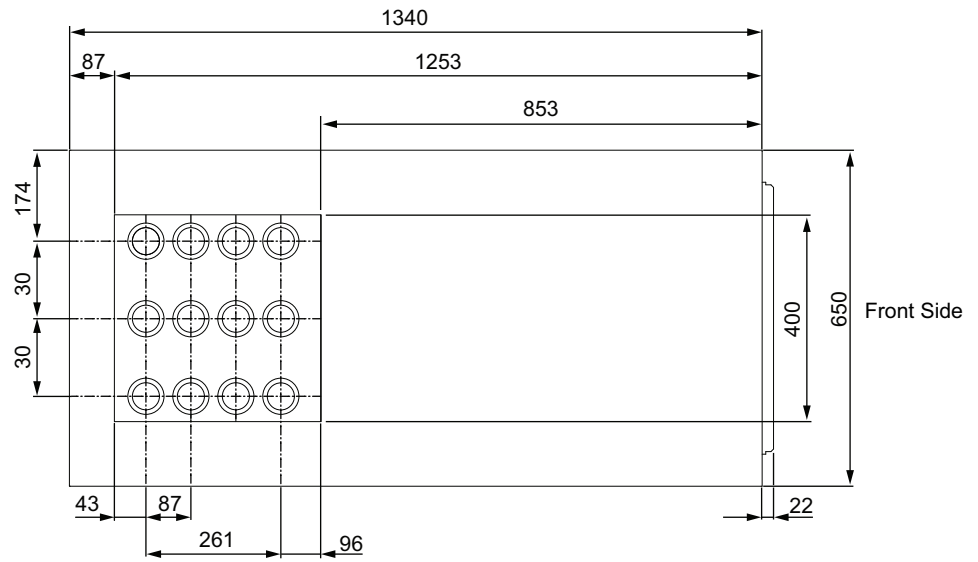
- E: The dimensions are as follows:
- Minimum distance for operating must be 1500 mm (minimum distance for face-to-face switchboard configuration must be 2500 mm).
  - 1550 mm for operation (extraction and positioning of mobile parts).
  - 2060 mm for the extraction of one cubicle with a depth of 1860 mm without displacing the others.
  - 1640 mm for the extraction of cubicle with a depth of 1440 mm and 1840 mm for the extraction of cubicle with a depth of 1640 mm without displacing the others.
  - To place the ramp and remove the Withdrawable VT (WVT) from the front side, a minimum of 2000 mm of space is required.

F: Main earth bar for the switchboard.

- NOTE:**
- The cubicle is used for different cubicle setups, including feeder/incomer, bus coupler, bus riser, and bus metering configurations.
  - For the extraction of the cubicle, contact Schneider Electric field service.





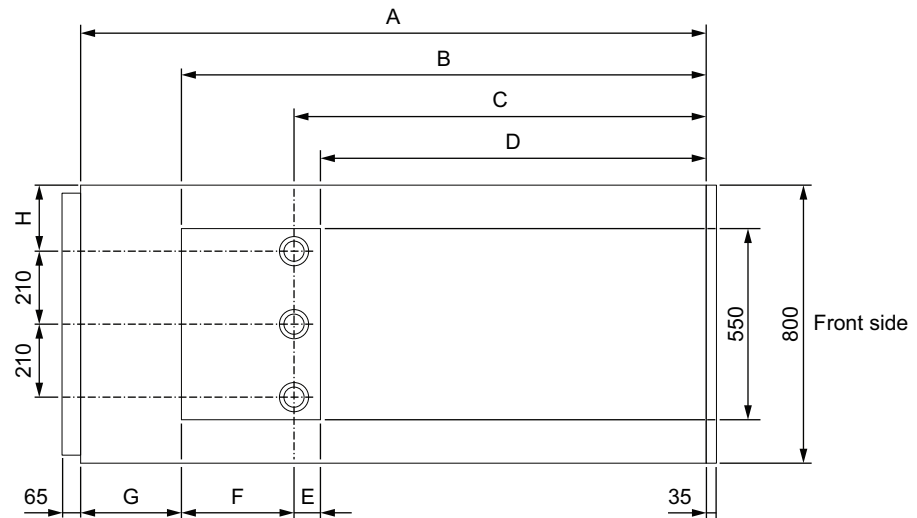


**Figure 12**  
MV Cable Entry with Four Runs

## I/F Cubicle with 1 CT per Phase – 800 mm

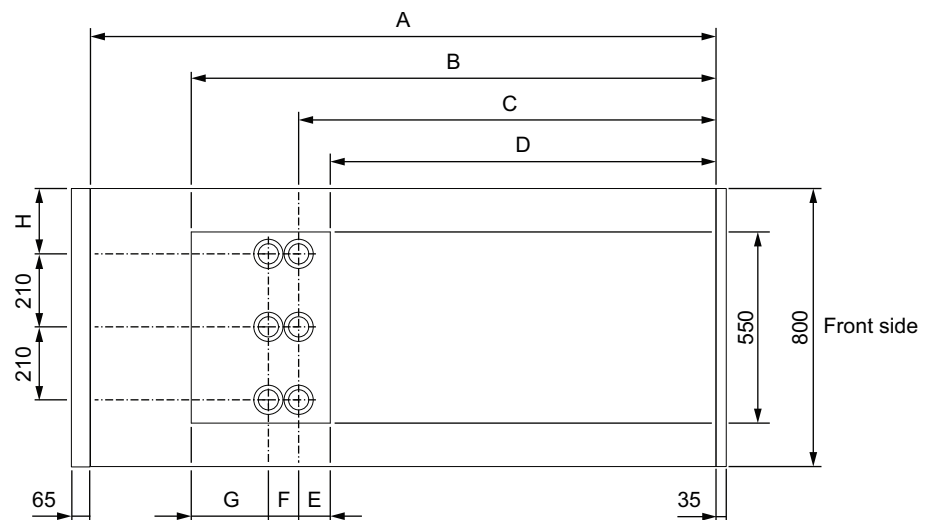
The maximum external cable diameter for single-core cables is  $\varnothing$  50 mm.

Maximum allowable cable size is 630 mm<sup>2</sup>.



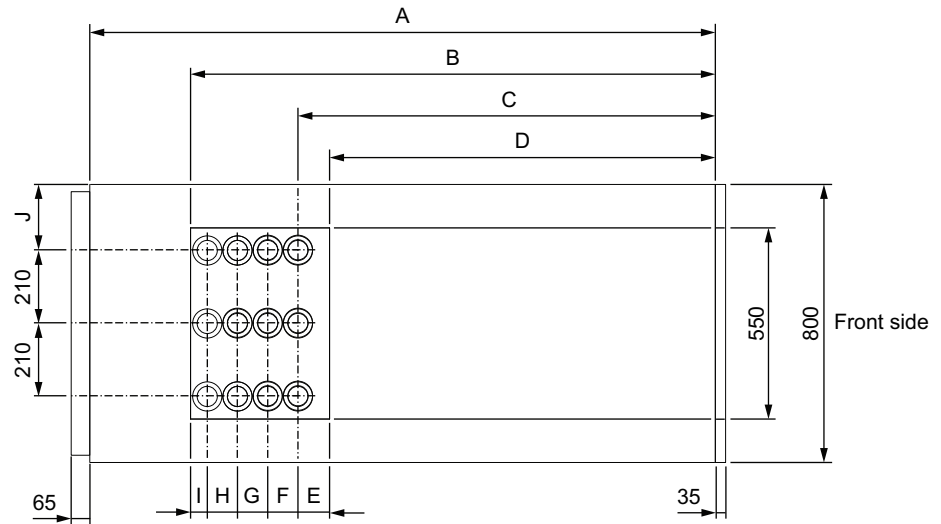
Voltage rating (kV)	Dimension (mm)							
	A	B	C	D	E	F	G	H
12/17.5	1340	1253	1012	853	159	241	87	190
24	1800	1510	1186	1110	76	324	288	190

**Figure 13**  
MV Cable Entry with a Single Run



Voltage rating (kV)	Dimension (mm)							
	A	B	C	D	E	F	G	H
12/17.5	1340	1253	1012	853	159	87	154	190
24	1800	1510	1201	1110	91	87	222	180

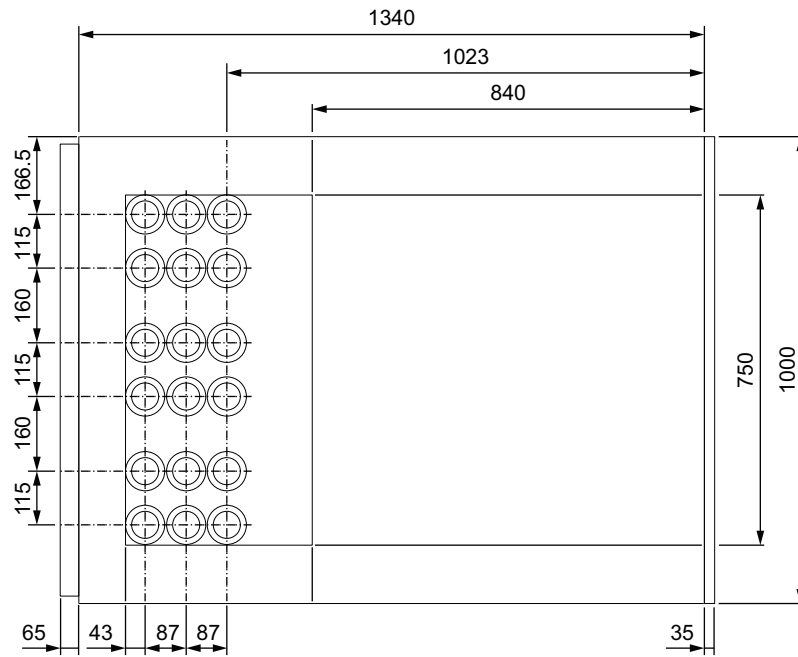
**Figure 14**  
MV Cable Entry with Two Runs



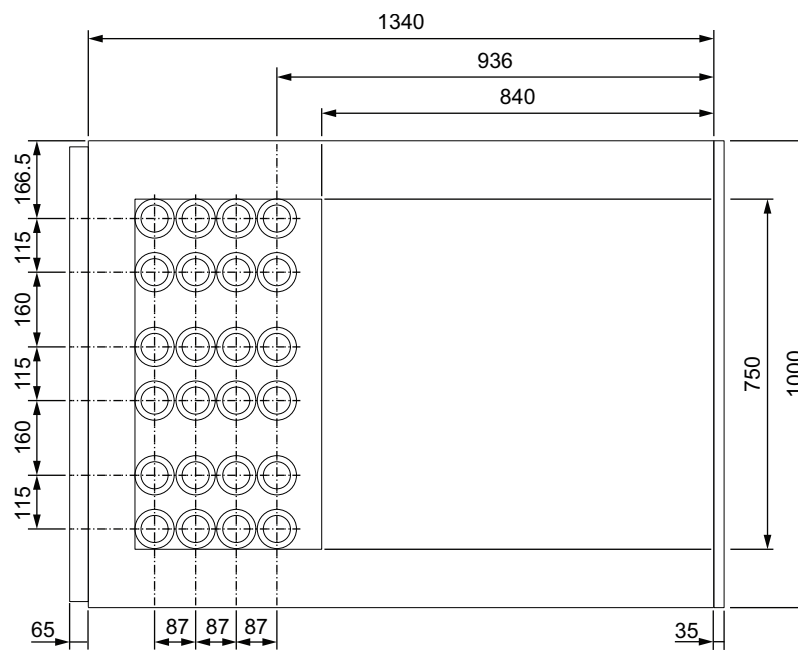
Voltage rating (kV)	Dimension (mm)									
	A	B	C	D	E	F	G	H	I	J
12/17.5	1340	1253	925	853	72	87	87	87	67	190
24	1800	1510	1201	1110	91	87	87	87	48	190

**Figure 15**  
MV Cable Entry with Four Runs



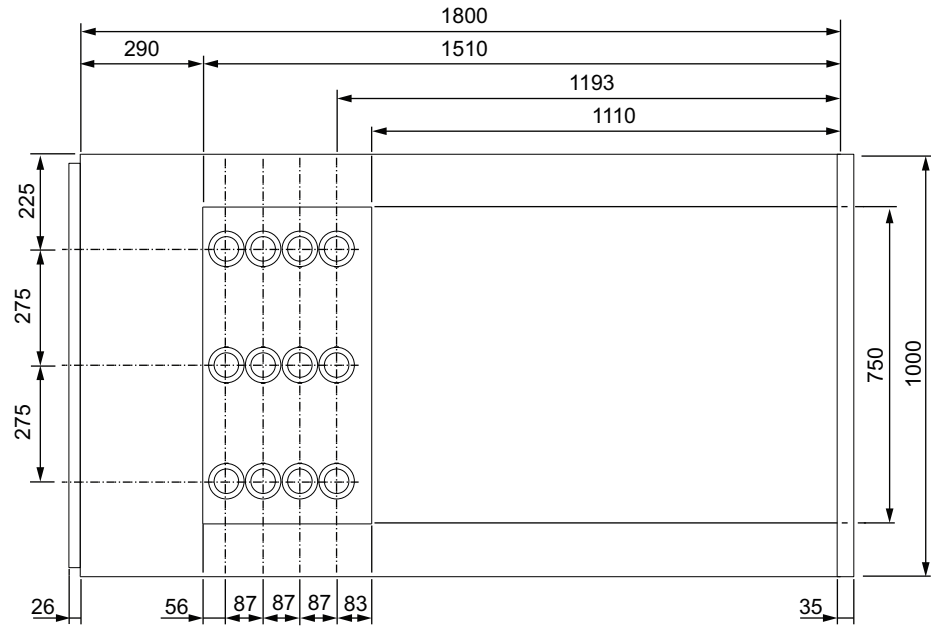


**Figure 18**  
MV Cable Entry with Six Runs



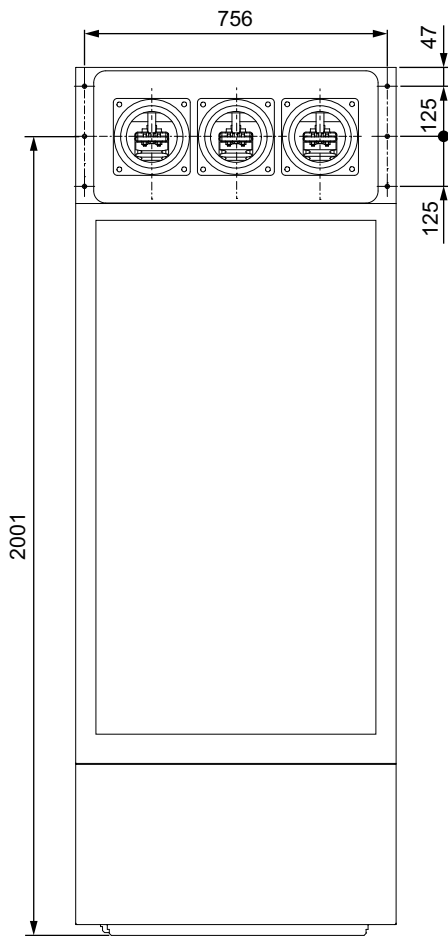
**Figure 19**  
MV Cable Entry with Eight Runs



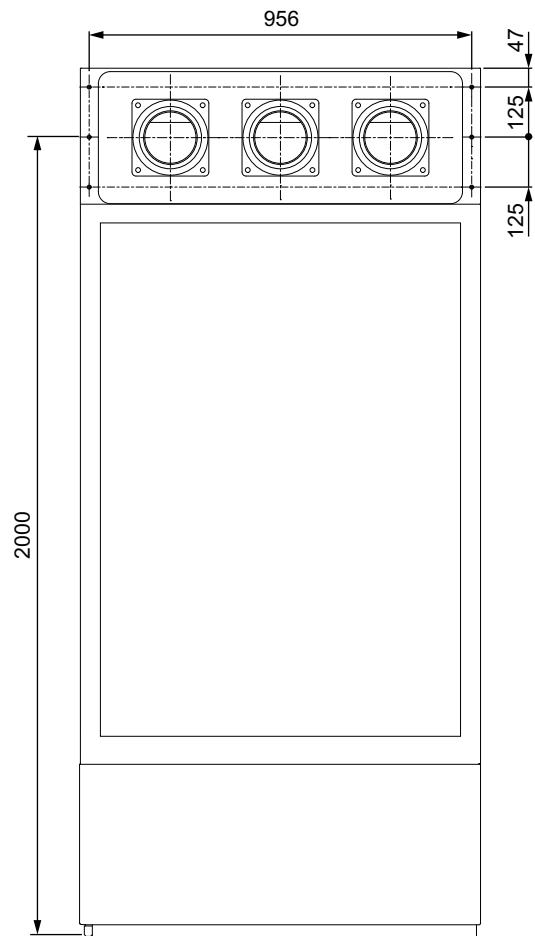


**Figure 22**  
MV Cable Entry with Four Runs

# Top Busway Entry



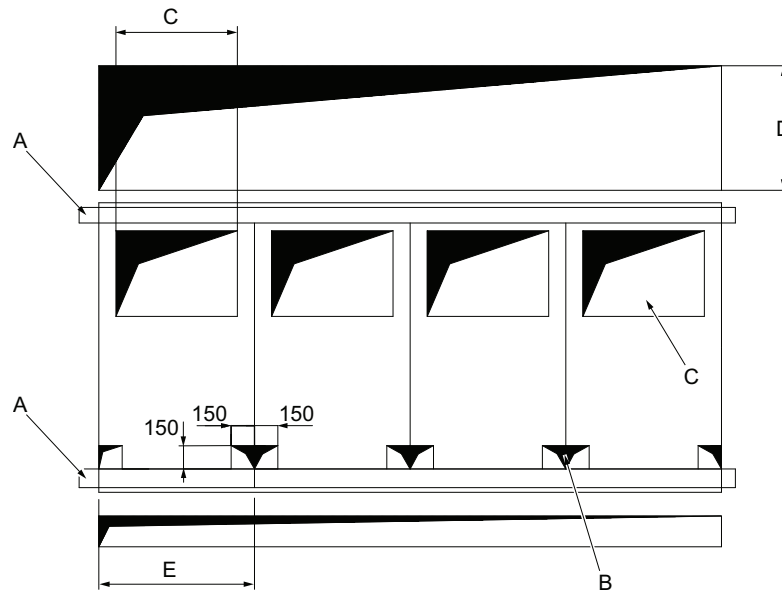
**Figure 23**  
Top view of 800 mm Top Busway Entry Cubicle 24 kV



**Figure 24**  
Top view of 1000 mm Top Busway Entry Cubicle 24 kV

# Civil Works Slab

## Reserved Area in Civil Works Slab

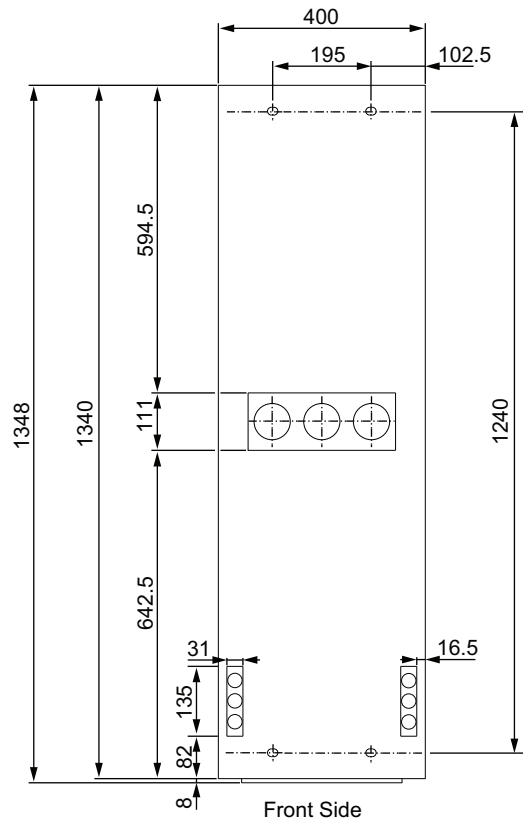


**Figure 25**  
Ground Plan of a MCS eT Switchgear Within a Switchgear Room

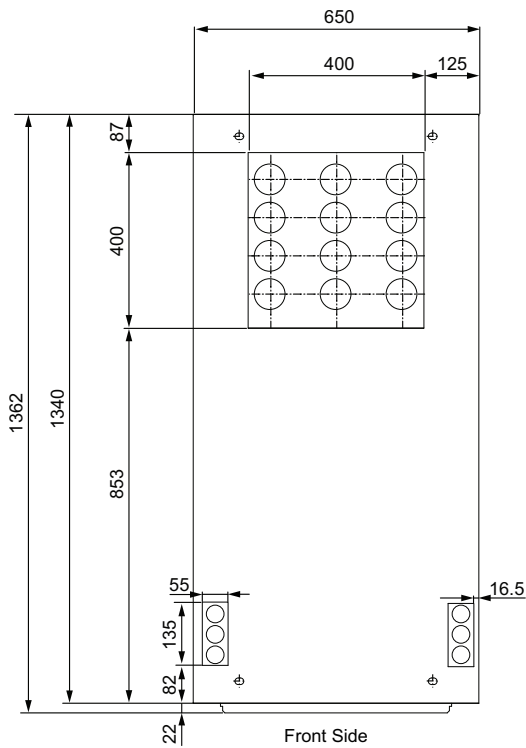
- A C-channel rail
- B Opening for routing external low-voltage cables
- C Opening for routing high-voltage cables
- D The depth of the cable trench should be maintained according to the bending radius of the cable, as specified in the supplier's catalog
- E The width of the cubicles

Cubicle width E (mm)	Dimension C (mm)		
	Rated voltage 7.2 kV	Rated voltage 12/17.5 kV	Rated voltage 24 kV
400	285	–	–
650	–	400	–
800	–	550	550
1000	–	750	750

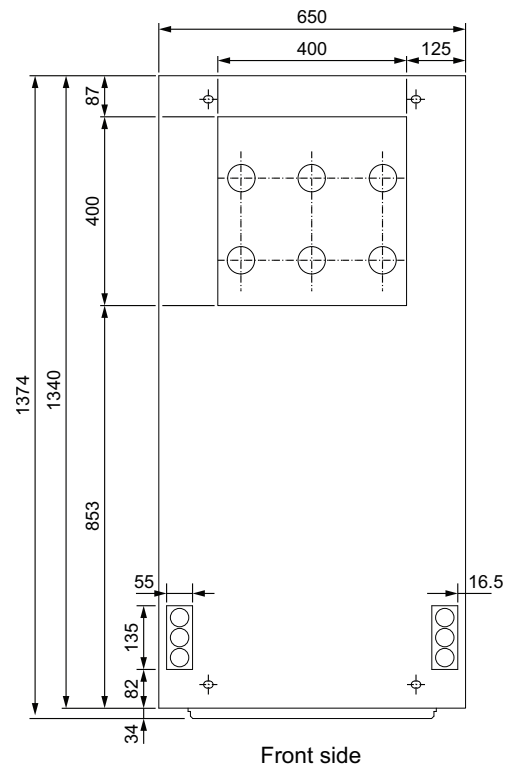
## Detailed View of Bottom Plate



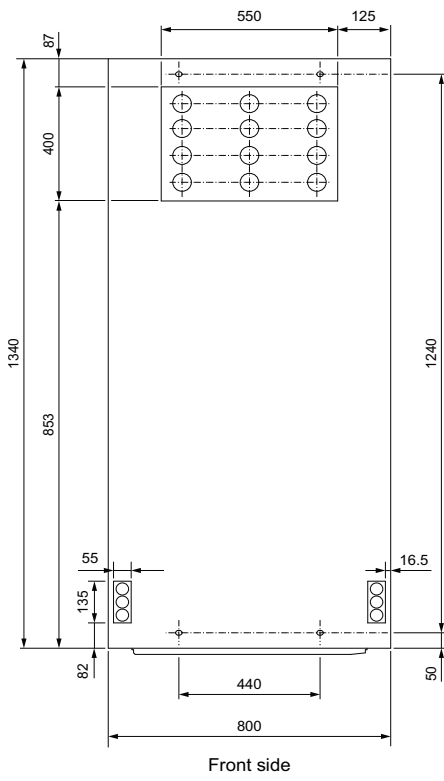
**Figure 26**  
Bottom Plate of 400 mm Feeder with Contactor Cubicle



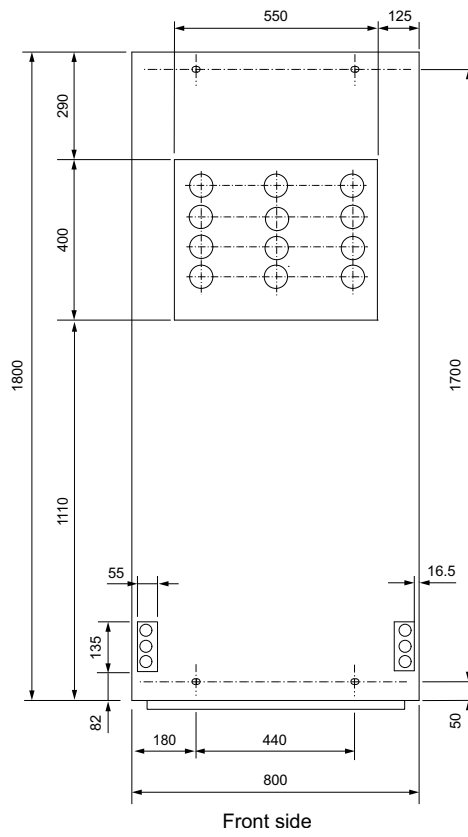
**Figure 27**  
Bottom Plate of 650 mm Cubicle with Four Runs



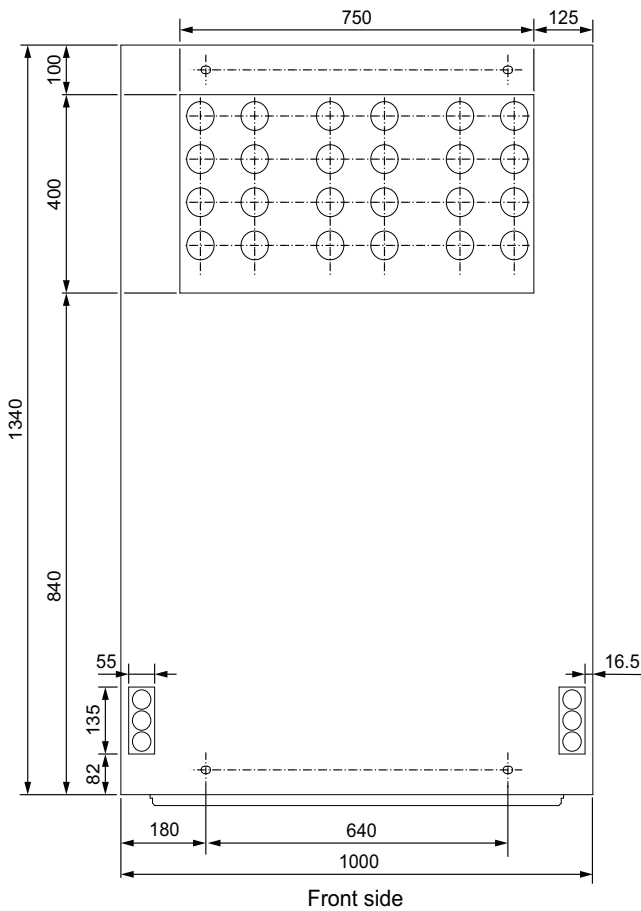
**Figure 28**  
Bottom Plate of 650 mm Cubicle with Two Runs



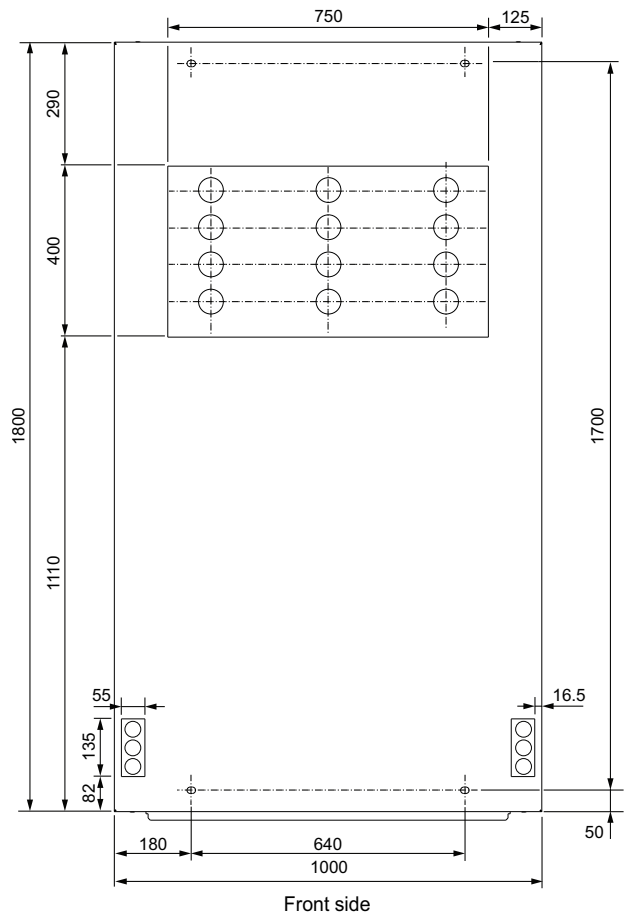
**Figure 29**  
Bottom Plate of 800 mm Cubicle for 12/17.5 kV



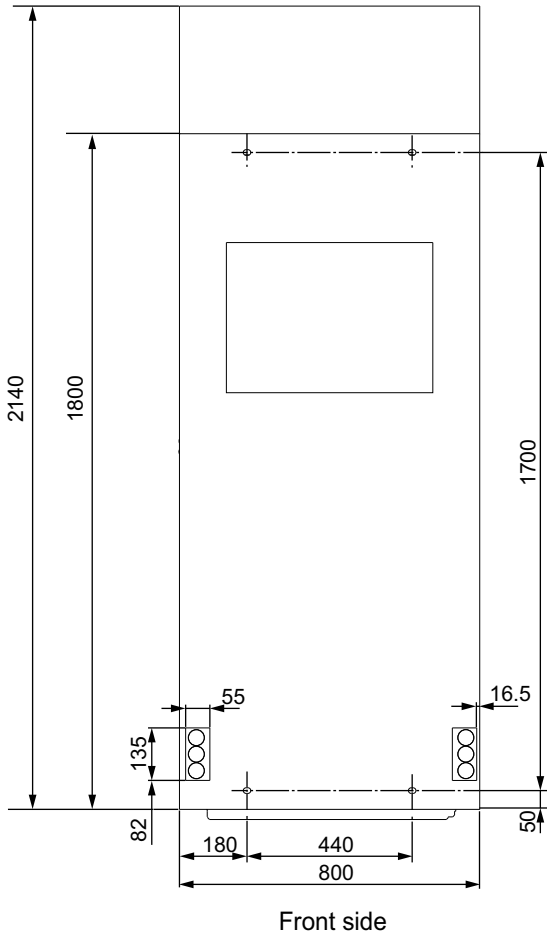
**Figure 30**  
Bottom Plate of 800 mm Cubicle for 24 kV



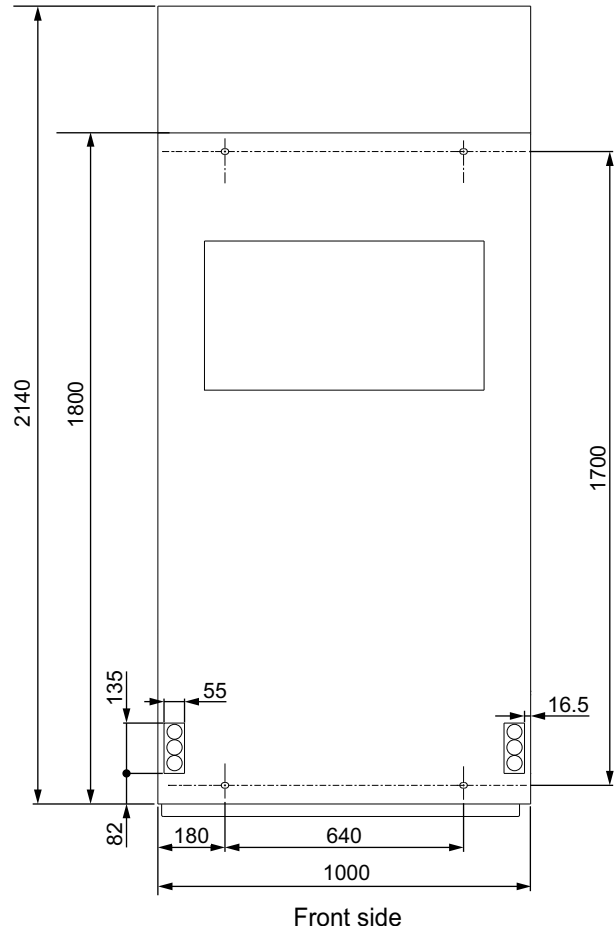
**Figure 31**  
Bottom Plate of 1000 mm Cubicle for 12/17.5 kV



**Figure 32**  
Bottom Plate of 1000 mm Cubicle for 24 kV

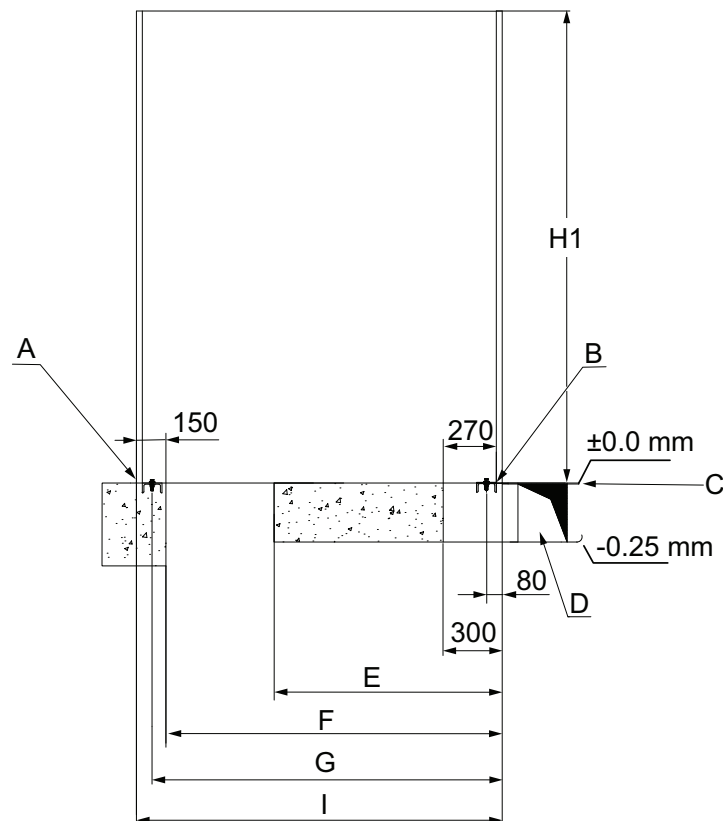


**Figure 33**  
Bottom Plate of 800 mm Top Busway Entry Cubicle 24 kV



**Figure 34**  
Bottom Plate of 1000 mm Top Busway Entry Cubicle 24 kV

## Switchboard with I/F Cubicle, and Reserved Space for Civil Engineering



**Figure 35**  
General Arrangement for Cable Entry

- A Foundation rail
- B Top surface of the foundation rail from 3–5 mm above the floor
- C Cover of the control cable conduit  $\delta = 5$  mm corrugated steel plate
- D Control cable trench 150 x 150 mm

Rated voltage (kV)	Dimension (mm)				
	H1	E	F	G	I
7.2/12	2240	634.5	1290	1325	1440 <sup>(1)</sup>
12/17.5	2240	890	1290	1325	1440 <sup>(1)</sup>
24	2400	1160	1710	1780	1860

<sup>(1)</sup> For a 4000 A cubicle with a width of 1000 mm, the depth is 1640 mm.

# Floor Finishing and Fastening of the Cubicles

## Assembly

### Safety Provisions

<b>▲ WARNING</b>
<b>HAZARD OF TOPPLING</b> When handling the moving devices, pay attention to uneven floor surfaces (for example, cracks, projections and so on) of the switchgear room. <b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>

<b>▲ WARNING</b>
<b>HAZARD OF FALLING</b> <ul style="list-style-type: none"><li>• Do not walk upon the topsides of the switchgear cubicles.</li><li>• During civil engineering activities, when working on the top of the switchgear cubicles (such as during the installation of deflectors, fans, or pressure relief ducts), temporarily attach a sturdy base plate that is walkable.</li></ul> <b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>

### Instructions for Assembly

MCS<sub>e</sub>T cubicles are delivered with E/S in ON position.

The VCBs are always shipped in open state (OFF) with the energy-storing device released.

<b>NOTICE</b>
<b>HAZARD OF INAPPROPRIATE ASSEMBLY</b> <ul style="list-style-type: none"><li>• Ensure there is no condensation, dirt, and dust during assembly of cubicles on all accounts.</li><li>• Observe and read assembly drawings before commencing the assembly work.</li></ul> <b>Failure to follow these instructions can result in equipment damage.</b>

## Floor Finishing

### Surface Condition

Before the switchgear is positioned at its site of installation, check that the fastening points are at level.

#### **NOTICE**

##### **HAZARD OF INSTALLING UNDER INADEQUATE CONDITIONS**

- Before positioning the switchgear at its installation site, ensure that the fastening points are at the correct level.
- Unevenness should not exceed  $\pm 2$  mm/m and there should not be a height difference of more than 6 mm over the entire width of the switchgear.

**Failure to follow these instructions can result in equipment damage.**

Laser check is required for accurate check of the floor levelness. Floor level is more essential for correct assembly and performance of the product.

### Floor Strength

The floor should have a compression withstand  $\geq 33$  MPa to roll the extraction tool on it without any damage.

## Fastening of the Cubicles

### **▲ WARNING**

#### **HAZARD OF INSTALLING UNDER INADEQUATE CONDITIONS**

Make sure that the height difference across the entire width of the switchgear does not exceed 6 mm during lifting.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### **NOTICE**

#### **HAZARD OF INSTALLING UNDER INADEQUATE CONDITIONS**

- Before positioning the switchgear at its installation site, ensure that the fastening points are at the correct level.
- Unevenness should not exceed  $\pm 2$  mm/m and there should not be a height difference of more than 6 mm over the entire width of the switchgear.

**Failure to follow these instructions can result in equipment damage.**

### **NOTICE**

#### **HAZARD OF INAPPROPRIATE ASSEMBLY**

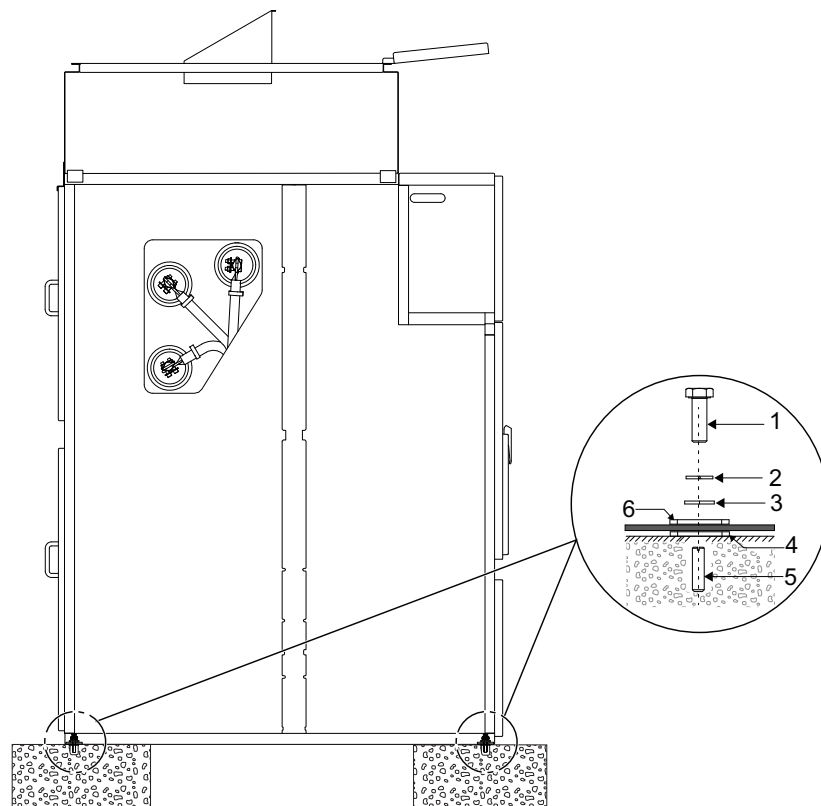
Comply with precise measurements for the placement of the cubicle, as the positioning of the first cubicle determines the placement of the remaining cubicles.

**Failure to follow these instructions can result in equipment damage.**

## Fastening on Concrete Foundations

Follow the below steps to fasten the cubicle to the floor on standard civil engineering works:

1. Position first cubicle on the floor in accordance with the switchgear-specific space assignment plan, refer to *Reserved Area in Civil Works Slab*, page 30.
2. Remove the cable compartment cover. Refer to *Access to the Cable Compartments, User Guide* (BQT6904800).
3. Once the cubicle is positioned:
  - a. Verify that the cubicle front is correctly aligned both horizontally and vertically.
  - b. If necessary, raise the cubicle and insert shims below the cubicle near the fastening points until the correct horizontal position is achieved, refer to Figure 36.
4. Fasten the cubicle with screws to the two fastening points on both the front end and the rear end.



**Figure 36**  
Cubicle Fastening on Concrete Foundation

- |   |                        |   |                            |
|---|------------------------|---|----------------------------|
| 1 | Screw M10 x 30         | 4 | Shim plate <sup>(1)</sup>  |
| 2 | Spring lock washer M10 | 5 | Slotted set screw M10 x 30 |
| 3 | Plain washer           | 6 | Plate 3 mm                 |

<sup>(1)</sup> Add shim plates as needed.

## Additional Fastening Variant (C-Channel)

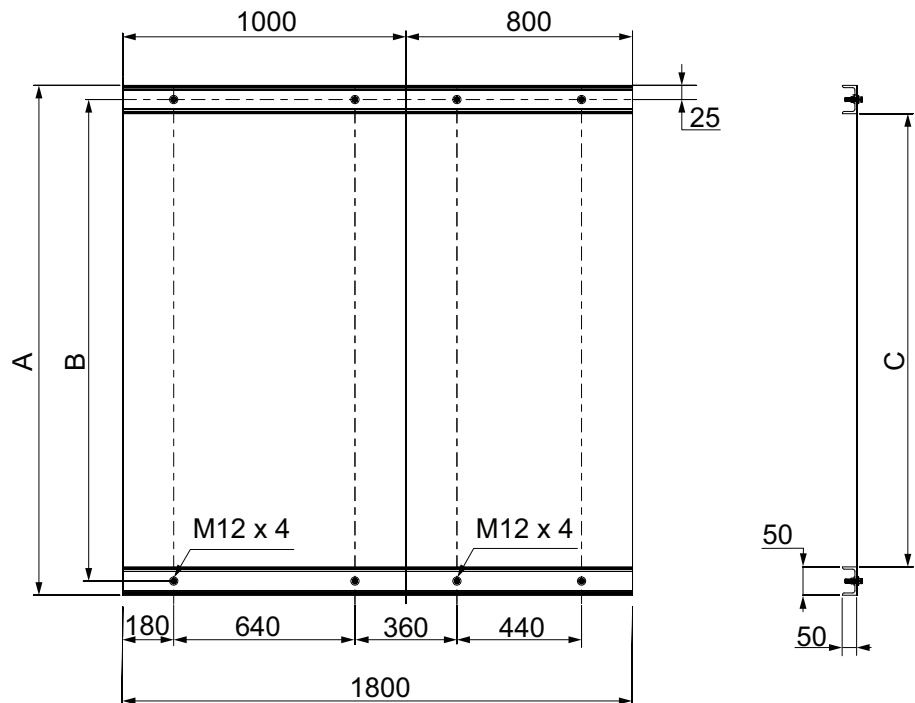
The additional fastening variants are available on request. For details, contact the manufacturer.

Follow the below steps to fasten the cubicle on C-channel rails on standard civil engineering works:

1. Drill holes into the C-channel frames at the intended cubicle fastening points, refer to Figure 37.
2. Position the cubicle on the C-channel rails, aligning the fastening points.
3. Insert dowel pin and other suitable fasteners (provided by Schneider Electric), refer to Figure 38.
4. Securely fasten the cubicle to the C-channel rails at the designated points.

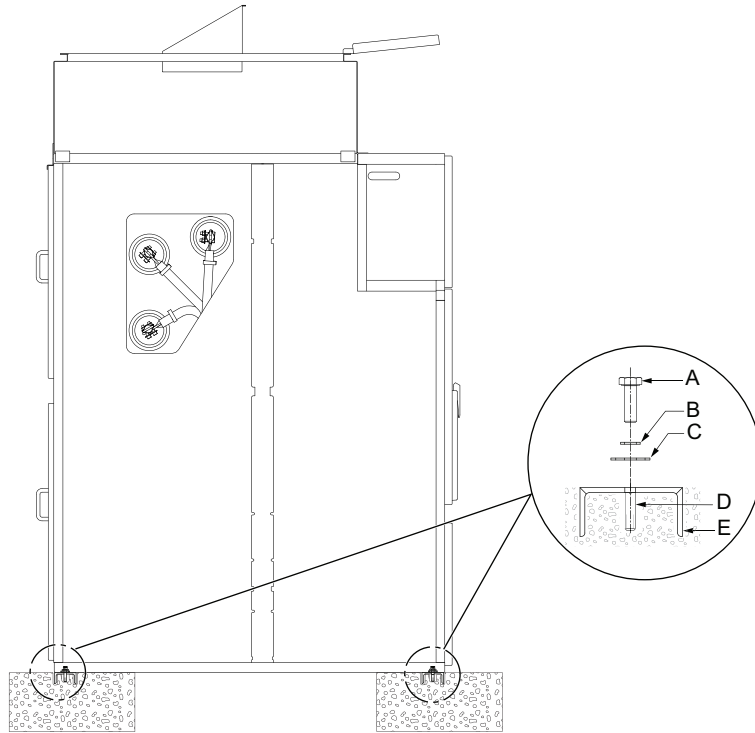
**NOTE:**

- The additional fastening variants are available on request. For details, contact Schneider Electric.
- C-channel rails are not be provided by Schneider Electric.



**Figure 37**  
Dimension of the Floor Space and C-Channel Rails

Rated voltage (kV)	Dimensions (mm)		
	A	B	C
7.2/12/17.5	1340	1290	1240
24	1800	1750	1700



**Figure 38**  
Cubicle Fastening on Base Frame

- |   |                      |   |                |
|---|----------------------|---|----------------|
| A | Allen screw M12 x 45 | D | Dowel pin      |
| B | Washer M12           | E | C-channel rail |
| C | Square washer        |   |                |

## Configuration of Incoming MV Cables

### **⚠ CAUTION**

#### **HAZARD OF INCORRECT CABLE INSTALLATION**

Comply with the guidelines specified by the manufacturer for the following:

- Adhere to the specified bending radius for the cables.
- Ensure appropriate cable laying/installation methods, the correct force, and techniques for pulling or pushing the cables.
- While handling the cables, ensure that the cables are within the maintenance space as per the specific configuration from insertion point to the cable initiation joint at the transformer.

**Failure to follow these instructions can result in injury or equipment damage.**

Other incoming configurations are possible, if there is greater clearance under the cubicle.

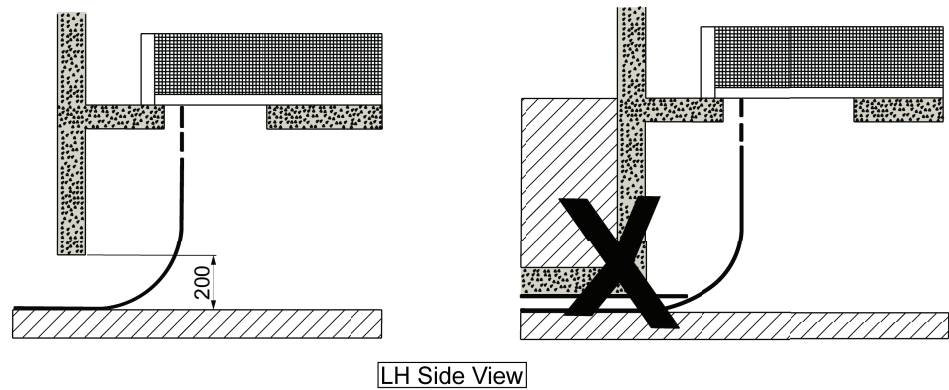
**NOTE:** If the cable box is used, adapt the depth of the maintenance space.

For any queries regarding the configuration, contact Schneider Electric customer support.

# Civil Engineering with Maintenance Space

## MV Cables Rear Entry

Intended for cables up to 240 mm<sup>2</sup>.

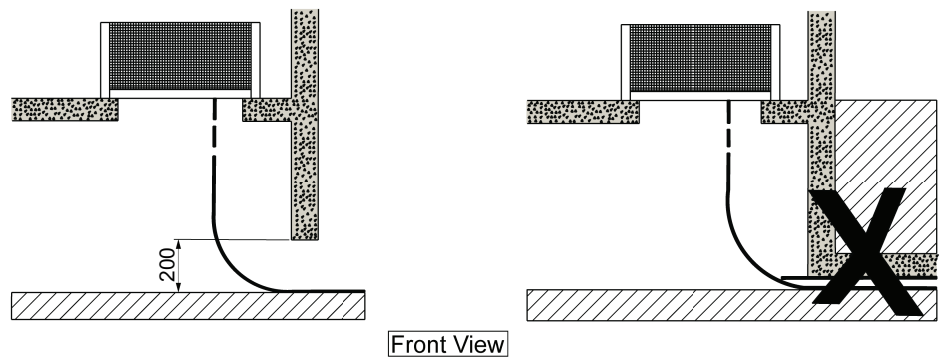


**Figure 39**  
MV Cables Rear Entry

**NOTE:** Not recommended for 630 mm<sup>2</sup> cables and above.

## MV Cables Entry from the Side Near a Wall

Intended for cables up to 240 mm<sup>2</sup>.



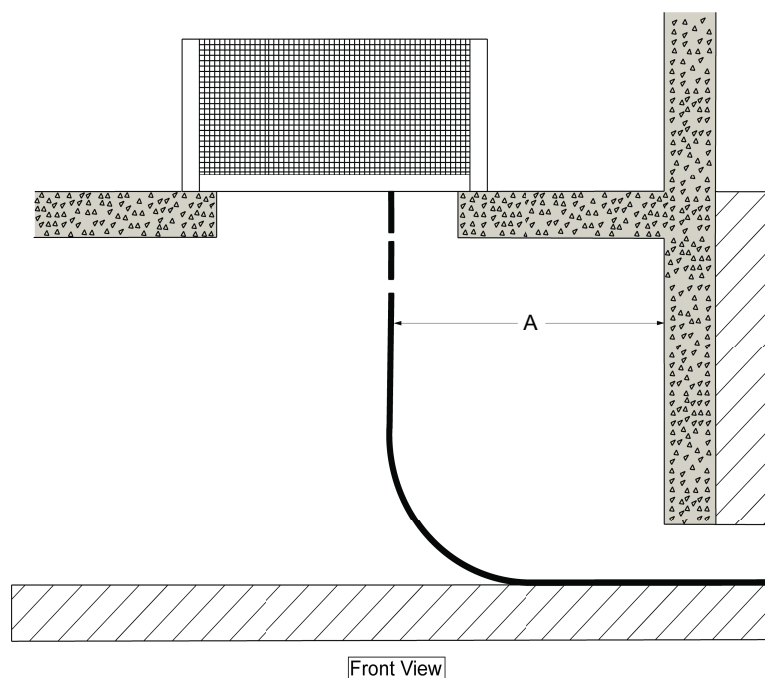
**Figure 40**  
MV Cables Entry from the Side near Wall

**NOTE:** Not recommended for 630 mm<sup>2</sup> cables and above.

## MV Cables Entry from the Side at a Distance from a Wall

It is recommended for all cable diameters up to 630 mm<sup>2</sup>.

According to the distance from the wall to the nearest MV cable (A), the dimension should be  $\geq 2000$  m for 630 mm<sup>2</sup> cables.

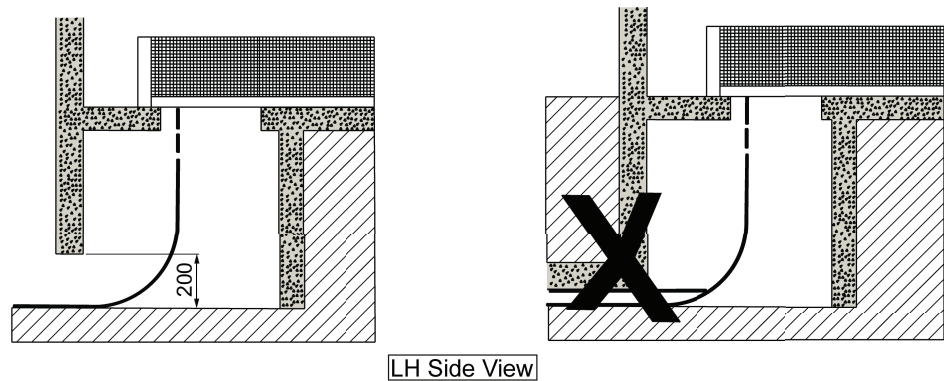


**Figure 41**  
MV Cables Entry from the Side at a Distance from a Wall

## Civil Engineering with a Cable Trench

### MV Cables Rear Entry

Intended for cables up to 240 mm<sup>2</sup>.

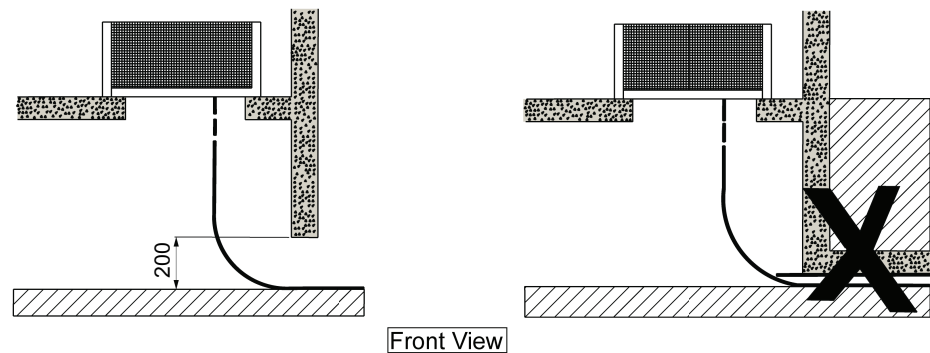


**Figure 42**  
MV Cables Rear Entry

**NOTE:** Not recommended for 630 mm<sup>2</sup> cables and above.

### MV Cables Entry from the Side Near a Wall

Intended for cables up to 240 mm<sup>2</sup>.



**Figure 43**  
MV Cables Entry from the Side near a Wall

**NOTE:** Not recommended for 630 mm<sup>2</sup> cables above.

---

# Glossary

## A

**AFL:** Accessibility Front Lateral

**AFLR:** Accessibility Front Lateral Rear

## B

**BME:** Busbar Metering and Earthing

**BSC:** Bus Section Coupler

**BSR:** Bus Section Riser

## C

**CT:** Current Transformer

## E

**E/S:** Earthing Switch

**EvoPacT HVX:** Vacuum Circuit Breaker

**EvoPacT MTX:** Metering Truck

## F

**F:** Feeder

## I

**I:** Incomer

## L

**LV:** Low Voltage

## M

**MV:** Medium Voltage (voltage class up to 24 kV)

## V

**VCB:** Vacuum Circuit Breaker

**VDIS:** Voltage Detecting and Indicating System

**VT:** Voltage Transformer

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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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