

# ***DGP/DMX/DMP BYPASS CABINET***

400 - 3200 kVA



Socomec Resources Center  
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and technical manuals

# CONDITIONS OF WARRANTY

The SOCOMEC bypass cabinet is part of a UPS system.

For the warranty conditions, please refer to the relevant chapter of the UPS manual.

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# SUMMARY

1. SAFETY STANDARDS	4
1.1. IMPORTANT	4
1.2. DESCRIPTION OF THE SYMBOLS USED ON THE LABELS APPLIED TO THE UNIT	5
2. REQUIREMENTS	8
2.1. STORING, SHIPPING AND MOVING	8
2.2. ENVIRONMENTAL REQUIREMENTS	8
3. INSTALLATION	11
3.1. INSTALLATION ON RAISED FLOORING	11
3.2. GENERAL RULES FOR CABLE INSTALLATION ON TRAY	12
3.3. ELECTRICAL REQUISITES	12
3.4. EXTERNAL CONNECTIONS	13
3.5. VALUES OF CURRENTS FOR CABLE SIZING	14
3.6. SIZING OF CIRCUIT BREAKERS	14
3.7. BACKFEED PROTECTION	14
3.8. DIMENSIONS AND WEIGHT (OVERALL)	15
3.9. UNPACKING PROCEDURE	16
3.10. MOVING	17
3.11. FIXING TO THE FLOOR (A RAISED FLOOR OR DIRECTLY TO THE FLOOR)	20
3.12. IDENTIFYING SWITCHING AND CONNECTION ORGANS	21
3.13. INSTALLATION PROCEDURES AND INSTRUCTIONS	24
3.14. BACKFEED PROTECTION	25
3.15. COMPLETION OF THE INSTALLATION	26
3.16. UPS GENERAL POWER OFF CONNECTION	26
3.17. CONNECTION	27
3.18. RACK SLOT FOR DGP BYPASS	28
3.19. COM SLOT AND DU612 CARD FOR DMX BYPASS	28
4. PREVENTIVE MAINTENANCE	29
4.1. FANS	29
5. COMMUNICATION	30
5.1. MULTILEVEL COMMUNICATION	30
6. TECHNICAL SPECIFICATIONS	31
7. PLANS	32
7.1. PLAN 1: FLOOR FIXING 400 - 500 kVA	32
7.2. PLAN 2: FLOOR FIXING 600 - 800 kVA	33
7.3. PLAN 3: FLOOR FIXING 900 - 1200 kVA	34
7.4. PLAN 4: FLOOR FIXING 1600 - 2000 kVA	35
7.5. PLAN 5: FLOOR FIXING 2400 kVA	36
7.6. PLAN 6: FLOOR FIXING 2500 - 3200 kVA	36
7.7. PLAN 7: DIMENSIONS 400 - 500 kVA	37
7.8. PLAN 8: DIMENSIONS 600 - 800 kVA	38
7.9. PLAN 9: DIMENSIONS 900 - 1200 kVA	39
7.10. PLAN 10: DIMENSIONS 1600 - 2000 kVA	40
7.11. PLAN 11: DIMENSIONS 2400 kVA - FRONT VIEW	41
7.12. PLAN 12: DIMENSIONS 2400 kVA - REAR VIEW	42
7.13. PLAN 13: DIMENSIONS 2500 - 3200 kVA	42

# 1. SAFETY STANDARDS

## 1.1. IMPORTANT

This document describes the procedure for installation, maintenance, technical specifications and safe use of this SOCOMEC unit. For further information visit the Socomec website [www.socomec.com](http://www.socomec.com).

The unit must be installed and activated only by qualified technical personnel and authorised by SOCOMEC.



Any work carried out on the equipment must be performed by qualified technicians authorised by SOCOMEC.



Failure to observe safety standards could result in fatal accidents or serious injury, and damage equipment or the environment.



Before carrying out any operations on the unit read this manual carefully.



Keep this manual safe for future reference.



Connect the PE ground conductor first before making any other connections.



High electrical voltages are generated inside the power system, which is dangerous for maintenance personnel not suitably qualified or trained for such work.

- Do not expose the unit to rain or liquids in general. Do not insert foreign bodies.
- This equipment complies with the European Community directives for industrial equipment and bears the approval mark:



- If the unit needs to be disposed it should only be entrusted to a specialist waste disposal company.
- Before connecting the unit check it is fully compatible with the UPS model.
- Only use UPS systems supplied by the manufacturer.

The product you have chosen is designed for commercial and industrial use only.

Products may have to be adapted for particular critical applications such as life support systems, medical applications, commercial transportation, nuclear facilities or any other application or systems where product failure is likely to cause substantial harm to people or property.

For such use it is advisable to contact SOCOMEC beforehand to confirm the ability of these products to meet the required level of safety, performance, reliability and compliance with applicable laws, regulations and specifications.



This is a product for commercial and industrial application in the second environment – installation restrictions or additional measures may be needed to prevent disturbances.

- The manufacturer will not be held liable for failure to follow the instructions in this manual or available at [www.socomec.com](http://www.socomec.com)
- The regulations and standards applicable to the place of installation of the apparatus must also be observed to ensure the prevention of accidents.
- Reference security information is in English language

### Risk of electrocution !

Only qualified and authorized personnel are allowed to intervene on the product.

Failure to follow the product instructions and this safety information may occur in personal injury, electric shock, burns, death or property damage.

Before proceeding to the assembly (editing), maintains, cleaning, dismantling, in the connection or in the modifications, the product and the installation must be switched off otherwise you risk to be electrocuted.

The instructions are valid in conjunction with the specific instructions of the product.

The products are designed exclusively for the application prescribed in the instructions.

Only accessories authorized or prescribed by SOCOMEC may be used in combination with the devices.

For any questions regarding the disposal of the product, contact SOCOMEC.

## 1.2. DESCRIPTION OF THE SYMBOLS USED ON THE LABELS APPLIED TO THE UNIT

All the precautions and the warnings on the labels and plates on the inside and outside of the equipment should be respected.



**DANGER! HIGH VOLTAGE (BLACK/YELLOW)**



**GROUND TERMINAL**



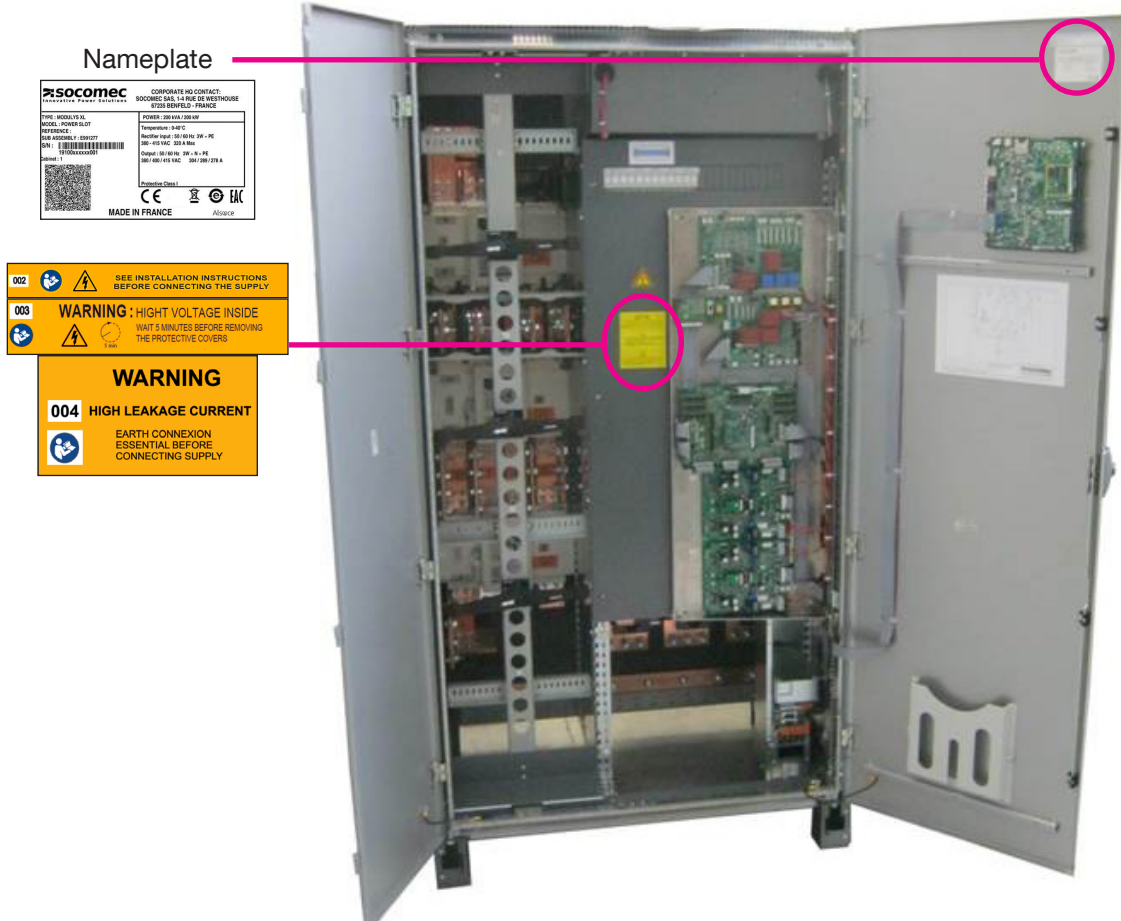
**READ THE USER MANUAL BEFORE USING THE UNIT**

### Bypass 400 - 500

Nameplate



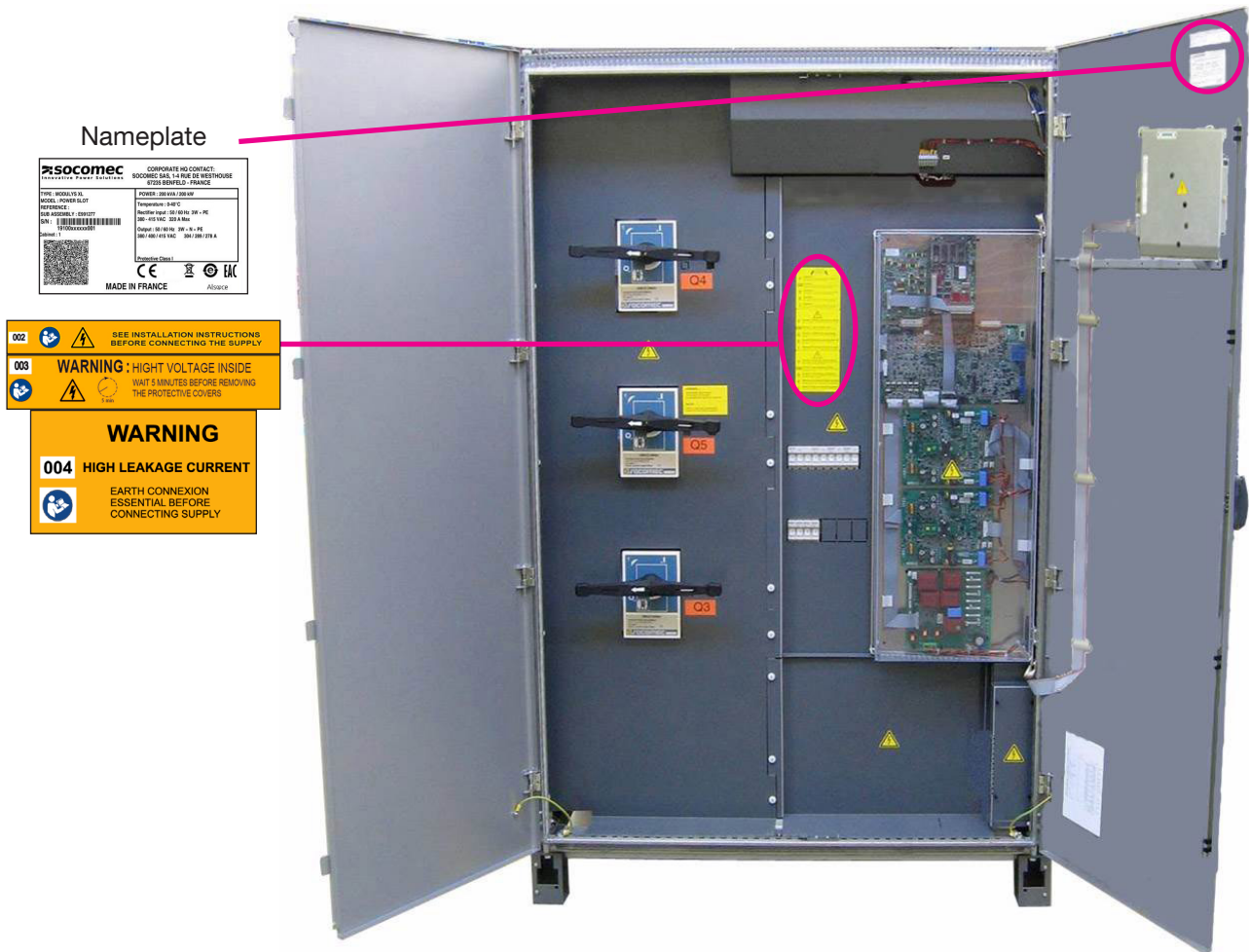
## Bypass 600 - 800



Nameplate



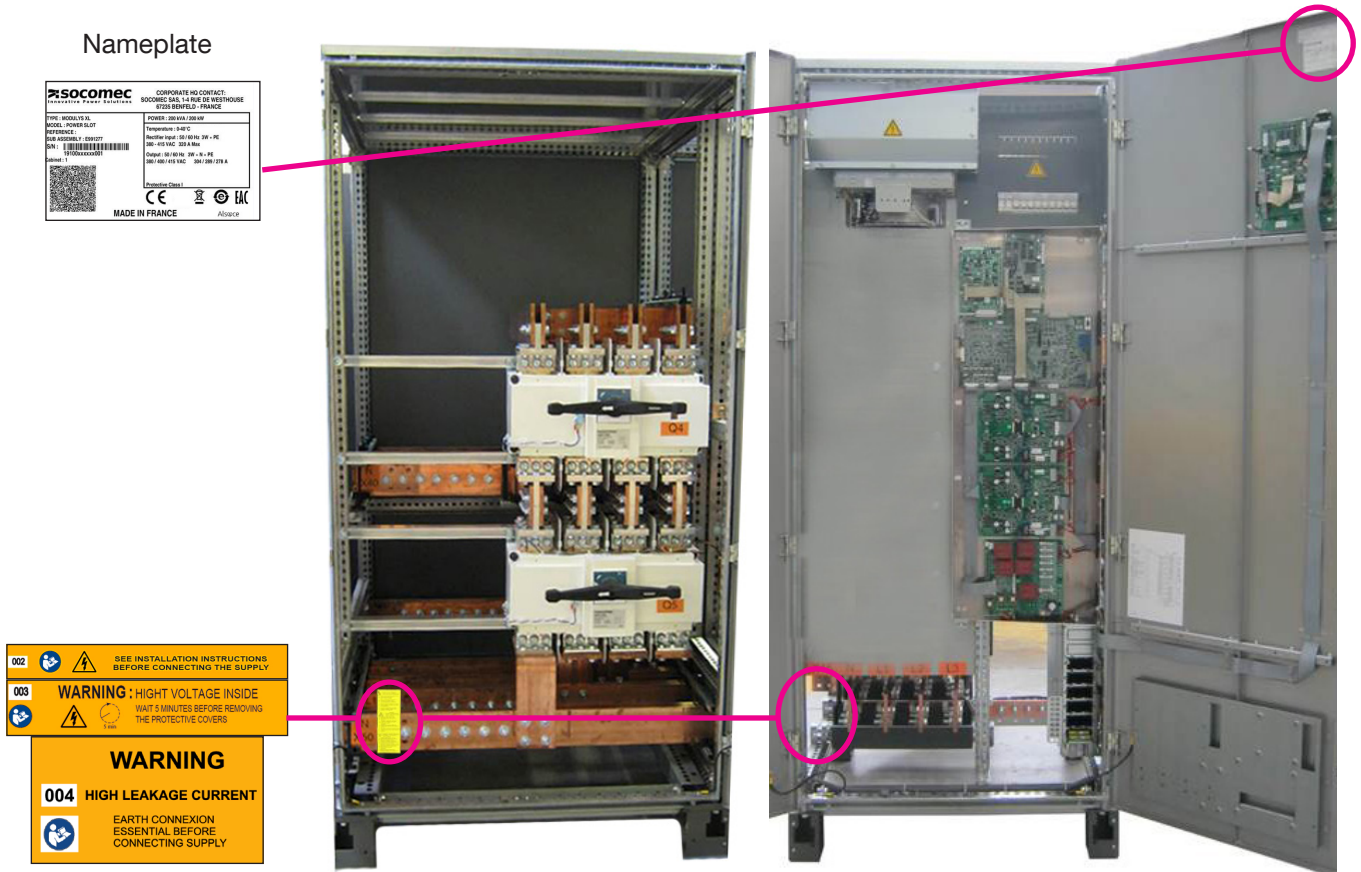
## Bypass 1000 - 1200



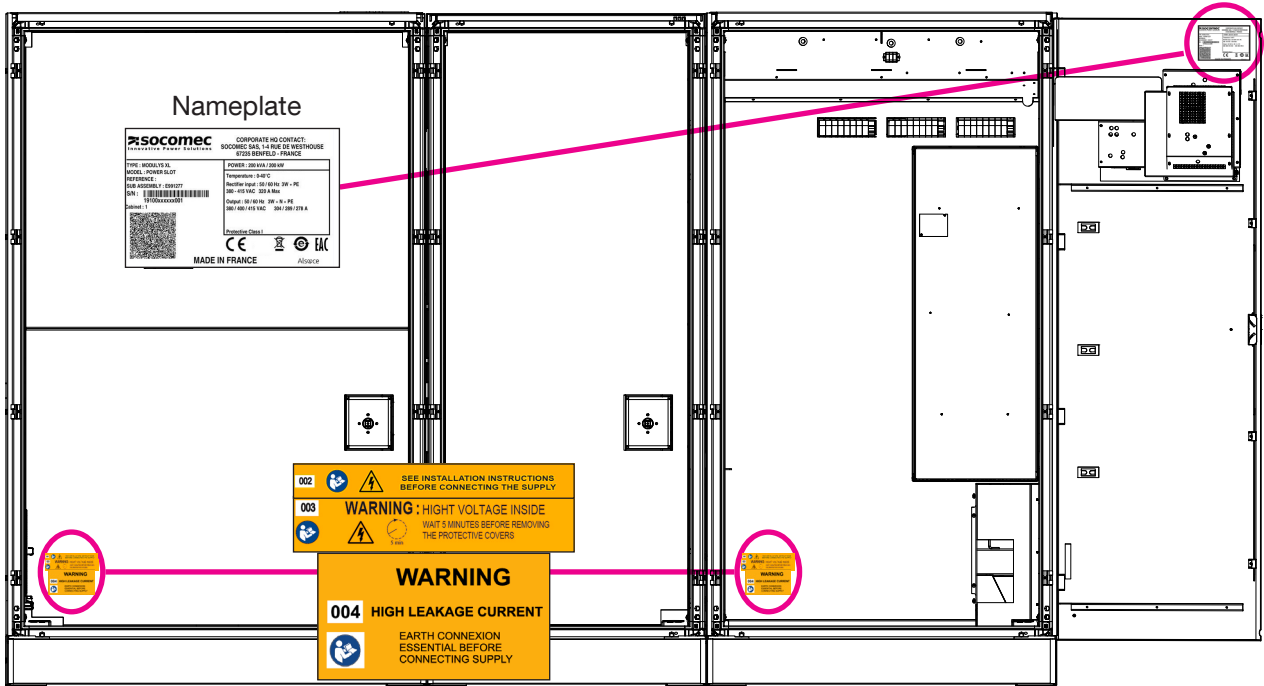
Nameplate



# Bypass 1500 - 2000



# Bypass 2400



# Bypass 2500 - 3200\*

\*please, refer to the attached file adapted to the project

## 2. REQUIREMENTS

### 2.1. STORING, SHIPPING AND MOVING

- If storing more than 6 month, please contact us
- The packaging guarantees the stability of the unit during shipping and physical transfer.
- Ensure that the floor is strong enough to support the weight of the unit.
- Carry the packaged unit as close as possible to the installation site.
- Device must remain in a vertical position during all shipping and moving operations.



**WARNING! HEAVY WEIGHT!**

Move the unit using a fork lift truck taking the utmost caution at all times.



The unit **MUST** be handled by at least two people.



Do not move the unit by putting pressure on the front door.



When moving the unit on even slightly sloping surfaces, use the locking equipment and braking devices to ensure that the unit does not fall over.



When the equipment is transferred from a cold to a warm place wait approx. two hours before putting the unit into operation.



**CAUTION IF DAMAGED.**

If the unit is found to be damaged externally or internally, or any of the accessories are damaged or missing, contact SOCOMEC.

### 2.2. ENVIRONMENTAL REQUIREMENTS

Install the unit in a technical room to which only skilled technicians have access. The room must be:

- of a suitable size;
- clean;
- free from inflammable items;
- maintained at a temperature between 0 °C and 40 °C.

The unit is not designed for outdoor use. Do not expose the unit to direct sunlight.

See TECHNICAL SPECIFICATIONS.

#### REGULATIONS CONCERNED WITH ENVIRONMENTAL ISSUES

##### Recycling of electrical products and equipment.

Provision is made in European countries to break up and recycle materials making up the system. The various components must be disposed of in accordance with the legal provisions in force in the country where the system is installed.



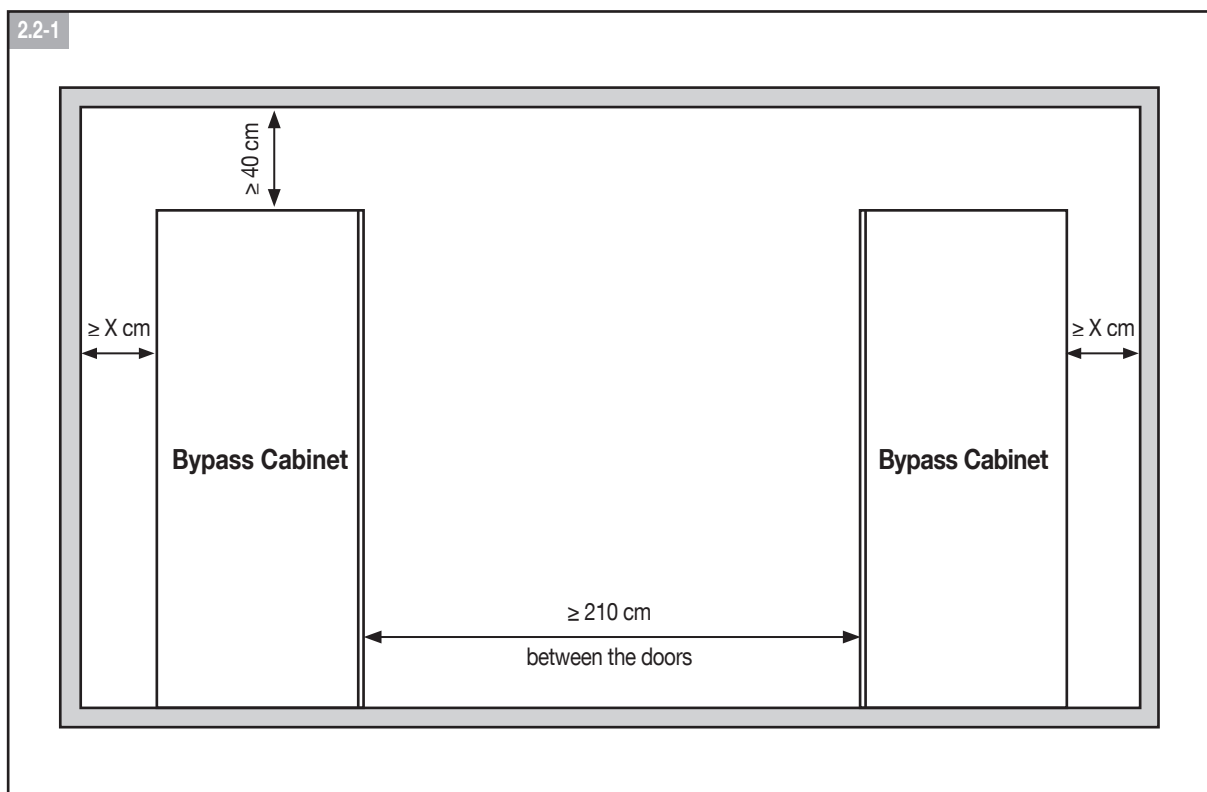
All packaging material must be recycled in compliance with the laws in force in the country where the system is installed.



- Bypass Cabinet must be installed in an environment without obstructions and which is dry, clean and dust-free.
- Avoid dusty environments or areas where there is dust from conductive or corrosive materials (e.g. metal dust or chemical solutions).
- In case of corrosive or industrial atmosphere environment, please, consult us.
- According to the power, the Bypass cabinet can or not be installed against a wall (see figure 2.2-1); the distance will depend on the cables present. The upper part of Bypass Cabinet must be positioned at least 40 cm away from the ceiling (figure 2.2-1).
- Bypass Cabinet switches are accessed from the front; however, a space of at least 1.5 metres should be left at the front of Bypass Cabinet for maintenance purposes.
- For Cabinet arranged frontally, leave a minimum space of 210 cm between the two cabinets so as to allow a passage-way when both doors are open (in accordance with the provisions of standard IEC 60364 - see figure 2.2-1).



**Bypass Cabinet should only be installed on a concrete surface or other non-combustible surface.**

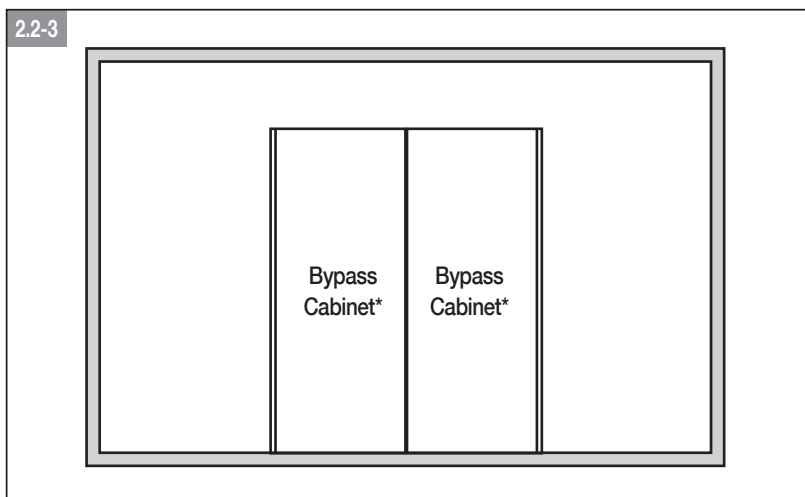
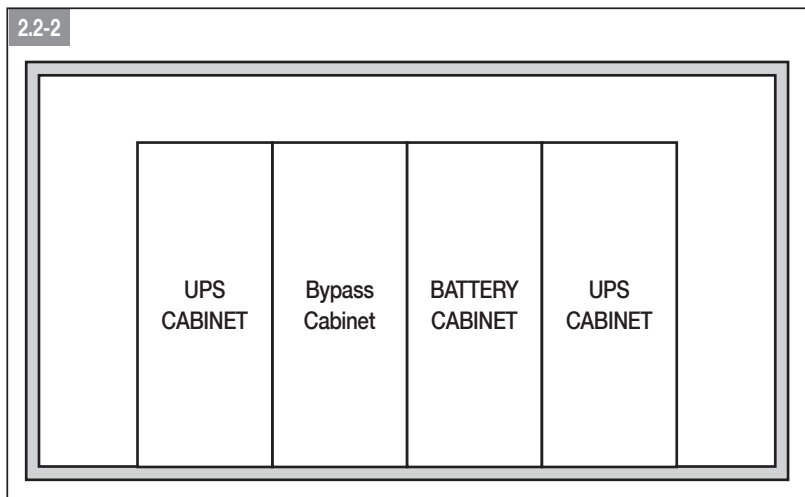


Cabinet (kVA)	X (cm)
400 - 500	xx
600 - 3200	0

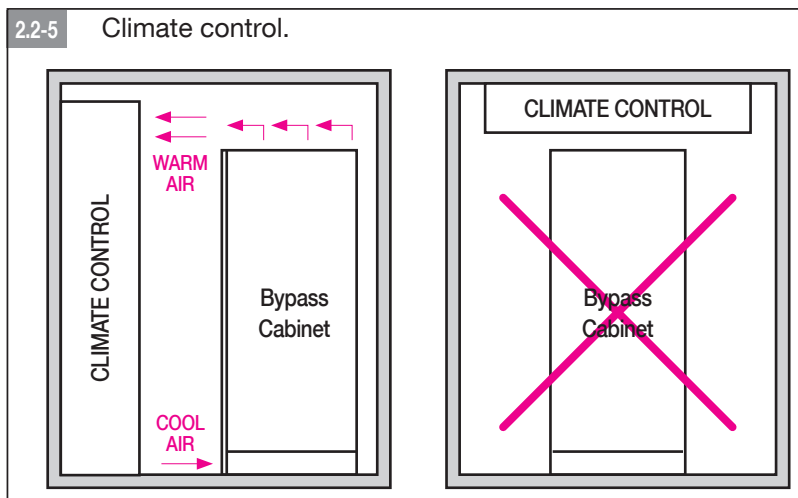
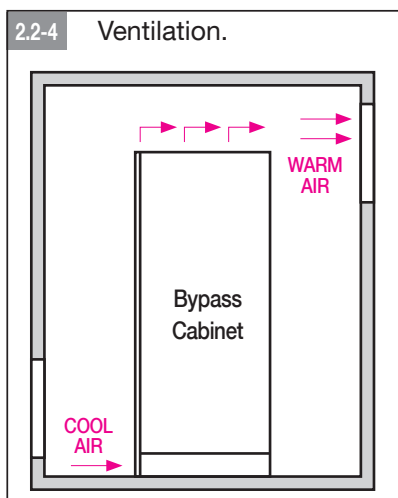
- Several cabinets can be installed adjacent to each other (figure 2.2-2).
- Except for 400 and 500 kVA as mentioned in 2.2-1, two Bypass Cabinet can be installed back to back (figure 2.2-3).
- Observe the direction of the ventilation flows (figure 2.2-4) and heat dispersion flows (figure 2.2-5). See chapter 3.1.2 for the technical specifications relating to the required ventilation values.



In order to profit from an optimal ventilation, the side panels must remain in place



\*except 400 and 500 kVA

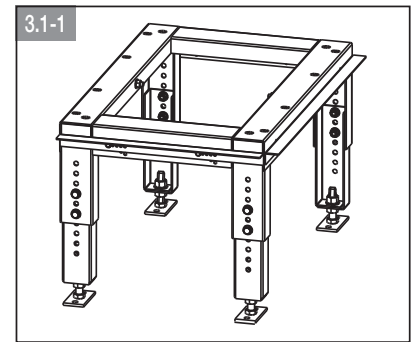


For fixing on the floor, see § 7

# 3. INSTALLATION

## 3.1. INSTALLATION ON RAISED FLOORING

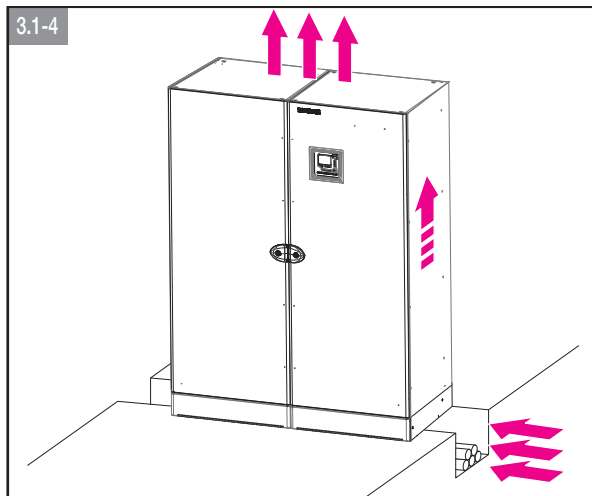
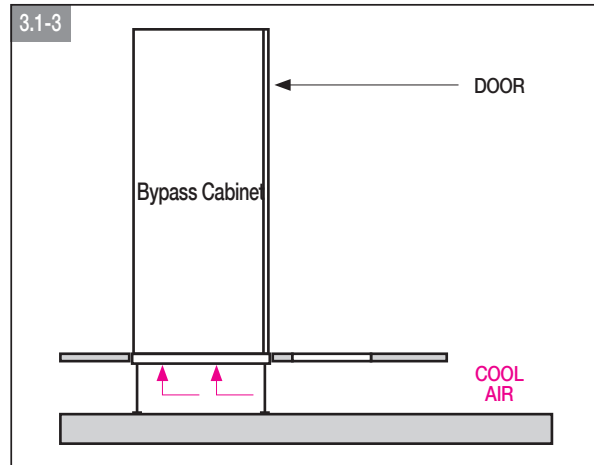
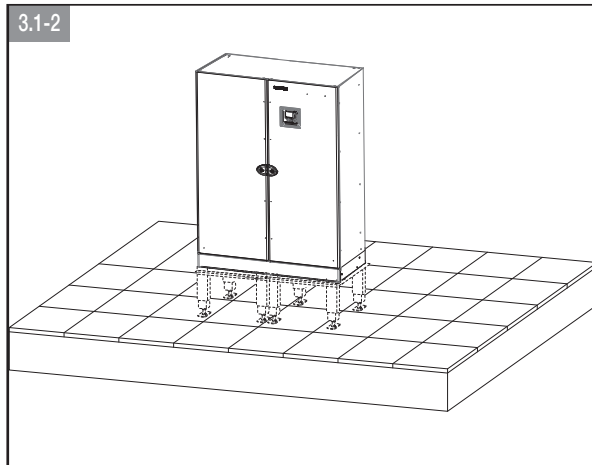
If Bypass Cabinet is to be installed on raised flooring, the SOCOMEC adjustable frame (figure 3.1-1) must be used to support the weight of the unit (figure 3.1-2).



Refer to the relevant installation manual provided in the packaging for information on frame assembly operations.

Provide small openings in the floor panels to ensure the air flow at the front (figure 3.1.1-1).

### 3.1.1. Installation over a tunnel



### 3.1.2. Heat loss and ventilation characteristics

kVA	Air flow		Total air flow m <sup>3</sup> /h	Heat losses at full load MAX.	
	Bottom	Mid height		Nominal condition	
				W	BTU/h
Bypass 400/500	100% *	0 % *	1050	2700	9213
Bypass 600/800			900	3640	12420
Bypass 1200			2000	5260	17948
Bypass 1500/2000			2200	11600	39581
Bypass 2400			2200	16700	56947
Bypass 2500			3000	17900	61039
Bypass 3200			3000	22100	75408

\* of Total air flow

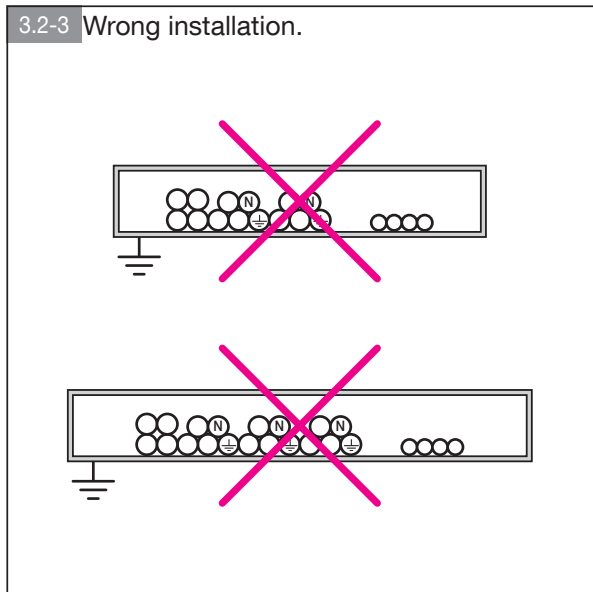
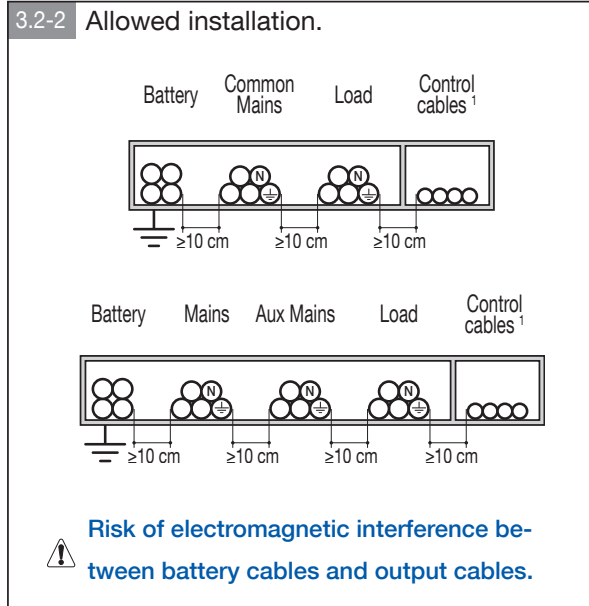
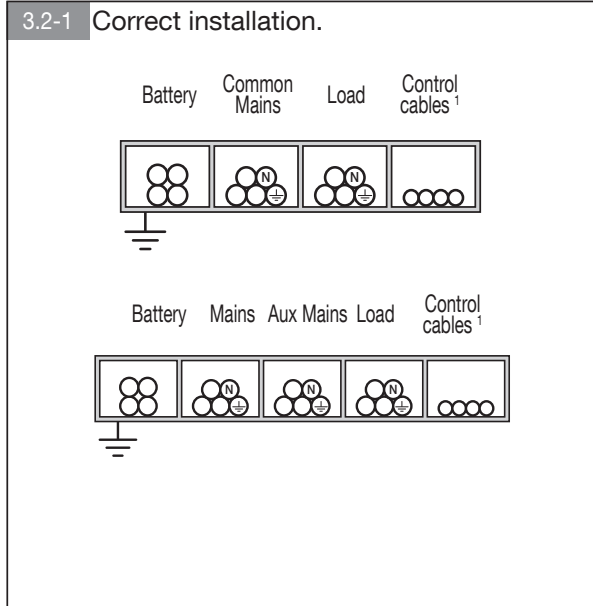
### 3.2. GENERAL RULES FOR CABLE INSTALLATION ON TRAY



The cables must be installed on trays when indicated in the following diagrams. The trays must be positioned near to Bypass Cabinet.



All metal and suspended ducts or those in raised flooring MUST be connected to earth and to the various cabinets.



<sup>1</sup> Control cables: connections between the cabinets and each unit, alarm signals, remote mimic panel, connection to the BMS (Building Management System), emergency stop, connection to generator.



**Do not expose control and power UPS cables to other equipment sensitive to the electromagnetic field.**

### 3.3. ELECTRICAL REQUISITES

The installation and the system must comply with national plant regulations. The electrical distribution panel must have a protection and sectioning system installed for the input mains and the auxiliary mains. If a differential switch is installed on the mains power switch (optional), it must be inserted upstream from the distribution panel.

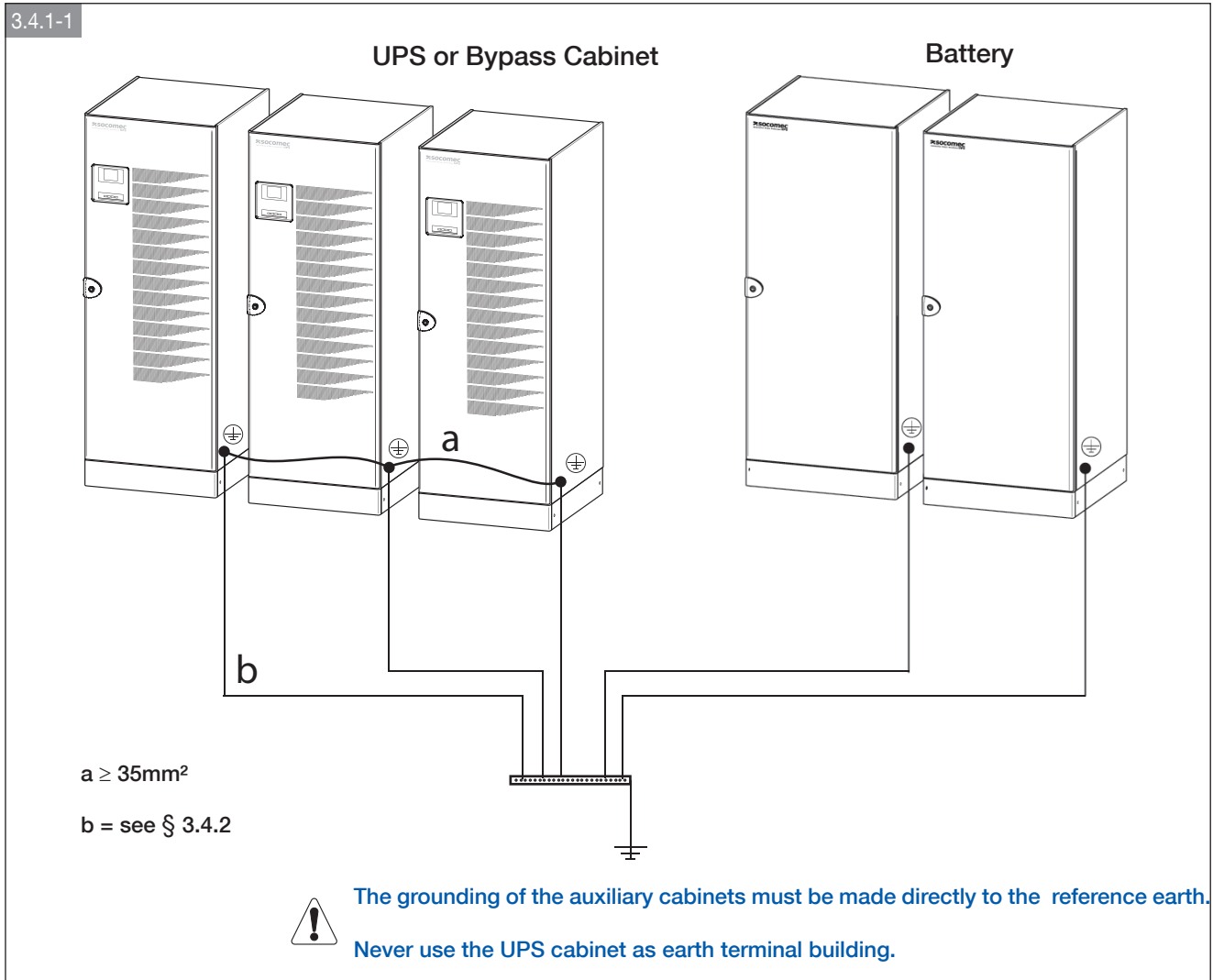
## 3.4. EXTERNAL CONNECTIONS

### 3.4.1. Connecting earth cables

IMPORTANT : due to EMI filters\*, there are "HIGH LEAKAGE CURRENTS".

As a consequence, it is imperative to connect earth cables before mains cables.

\* EMI filters = protection against electromagnetic disturbances.



### 3.4.2. Earth cable cross-section

We recommend a section of ground wire at least half of the section of cable phases AND comply with standards of the country (for example NFC 15100 in France).

### 3.4.3. Leakage current (rating of the earth leakage current device)

The minimum "off-delay relays" recommended is 3 A .

### 3.4.4. Earthing systems and Bypass (TT consult us)

In TNC: Bypass output neutral must be grounded.

In TNS: when opening a 4 phases switch between Bypass output and transformer upstream of the bypass, system grounding must be present to reference the neutral to ground.

### 3. 4.5. Neutral cable cross-section

It is necessary to check:

- a) the minimum cross-section of the neutral cable must equal one of the phase conductors.
- b) the balancing of the loads across the three phases,
- c) the values that will trip the protective devices.

### 3.5. VALUES OF CURRENTS FOR CABLE SIZING

NOTE : these values are only indicative for standard systems.

Operating conditions are as follows:

- Input/output power supply voltage 3 x 400V, for other voltages 380V or 415V, the current values must be multiplied by 1.05 and 0.96 respectively,
- Bypass Cabinet is operating at rated power.

	Bypass							
Power kVA	400	500	800	1200	2000	2400	2500	3200
Currents (A)	577	721	1157	1732	2895	3464	3608	4619

Note: sizing of cables and protections upstream of the bypass shall take into account:

- overloads caused by non-linear loads,
- possible overloads admitted by Bypass Cabinet i.e.  $1,1I_n$  for 1h,  $1,25I_n$  for 10min or  $1,5I_n$  for 1min (Refer to § 6 "Technical specifications").

### 3.6. SIZING OF CIRCUIT BREAKERS

Values are only indicative as per the following conditions:

- the rectifier and bypass input voltage is 3 x 400V overload 150 %
- the length of cabling between the circuit breaker and Bypass Cabinet is <10 metres.

	Bypass							
Power kVA	400	500	800	1200	2000	2400	2500	3200
Sizing of circuit breaker	800 A	800 A	1200 A	2000 A	3000 A	4000 A	4000 A	5000 A

Note 1: the admissible input voltage tolerance is +/-10% - the sizing of circuit breakers has therefore to be adjusted accordingly.

Note 2: the protection on the bypass input is intended for cable protection and does not take into account the  $I^2T$  of thyristors.

Nota 3: Ensure that the circuit breaker trigger curve takes into account a possible overload

### 3.7. BACKFEED PROTECTION

Bypass Cabinet is preset for the installation of external protection devices against the backfeed of dangerous voltages on the auxiliary backup mains power supply line (AUX MAINS SUPPLY), the input power supply line (MAINS SUPPLY) is already equipped in internal.

In the event that the equipment does not have a voltage protection device, warning labels must be affixed on all mains power disconnectors installed away from Bypass Cabinet area, in order to remind support personnel that the circuit is connected to a UPS (see also § 1 "Safety" of this manual and paragraph 4.9.3 of standard IEC62040-1). The label is supplied with the equipment.

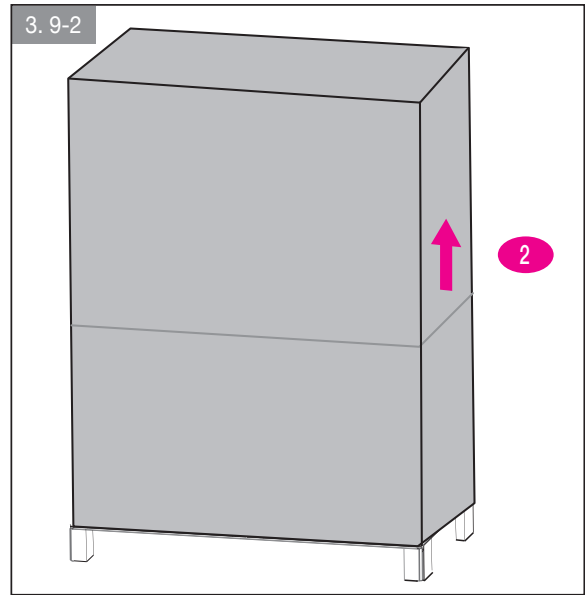
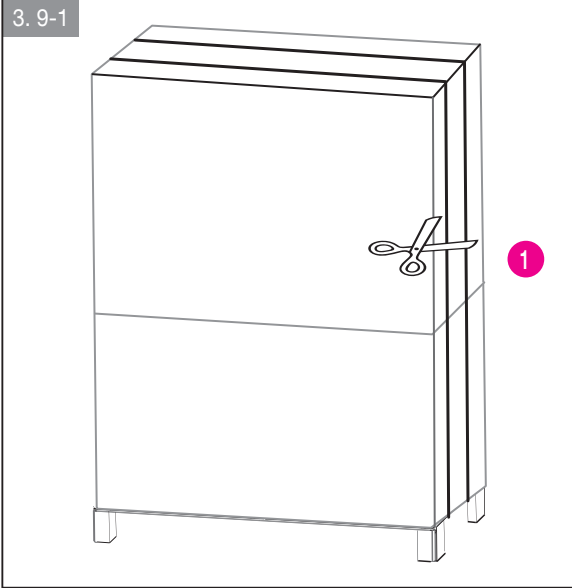
If, in certain anomaly states, or because of the installation upstream (e.g. undetected and protected earth fault, or high leakage in a phase, or with IT systems) there is a hazardous potential on neutral, a suitable isolating switch must be provided on the neutral as well, or else there must be a detection, signalling and protection system.

For the connections, see to § 3.14.

### 3.8. DIMENSIONS AND WEIGHT (OVERALL)

kVA		L x W x H (mm)	Weight (estimate)
400 - 500 with switches		810 x 845 x 1930	315 kg
600 - 800 with switches		1010 x 845 x 1930	420 kg
1200 with switches		1210 x 845 x 1950	600 kg
1500 - 2000	with switches	2610 x 1245 x1950	2000 kg
	without switches	2410 x 1245 x1950	1600 kg
2400	with switches	3010 x 1245 x1950	2600 kg
	without switches	2410 x 1245 x1950	1700 kg
2500	with switches	4010 x 1245 x1950	3000 kg
	without switches	3210 x 1245 x1950	2700 kg
3200 without switches		3210 x 1245 x1950	3000 kg

### 3.9. UNPACKING PROCEDURE



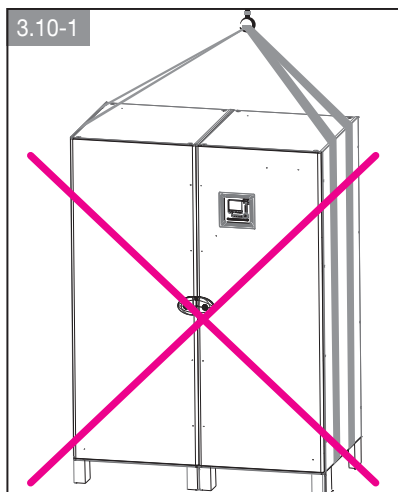
Place Bypass Cabinet in the installation area.



All packaging material must be recycled in compliance with the laws in force in the country where the system is installed.



### 3.10. MOVING



When being moved, the cabinets must be kept in an upright position.



Never use harnesses!

#### 3. 10.1. Moving with belts

- Length of belts: X mm:

Length of cabinet (mm)	X (mm)
600	> 700
800	> 900
1000	> 1200
1200	> 1350

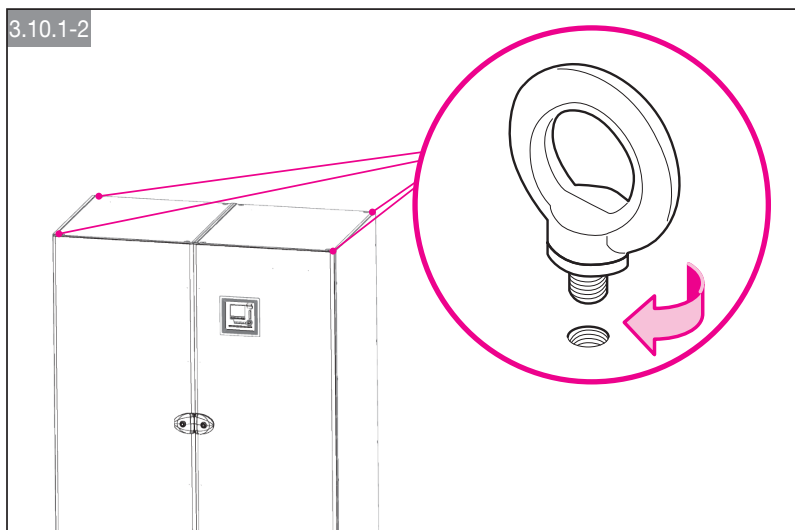
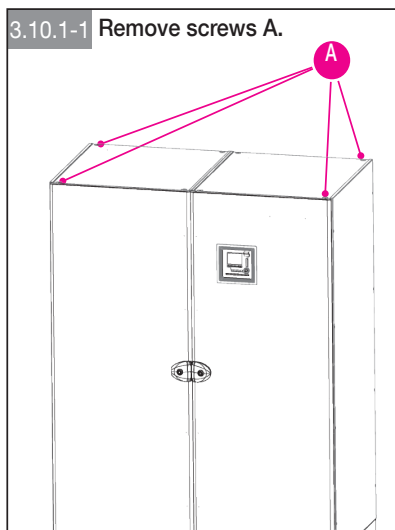
- Lifting eyebolts (supplied on request): internal  $\varnothing$  30 mm, thread M12.

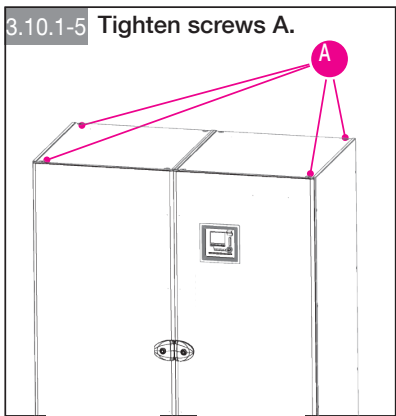
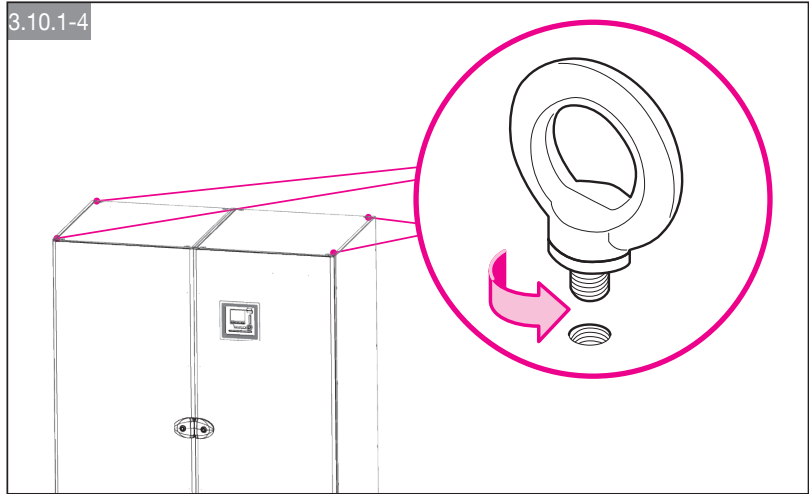
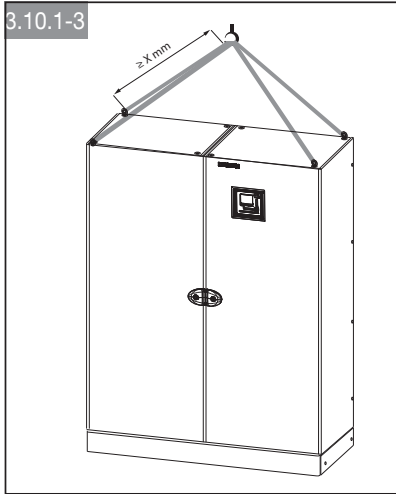


Lift and handle the cabinets with the utmost care and without jerking!



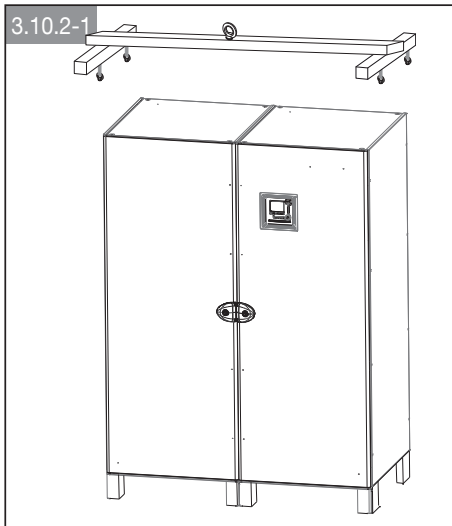
Each individual cabinet must be handled separately.





### 3. 10.2. Moving with lifting truss.

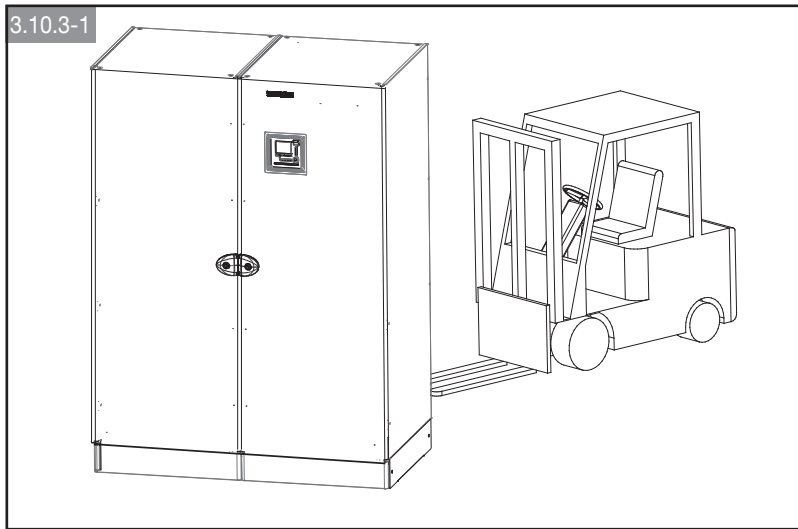
If the height of the ceiling does not allow the use of belts, Bypass Cabinet can be moved using lifting trusses.



### 3. 10.3. Handling from underneath

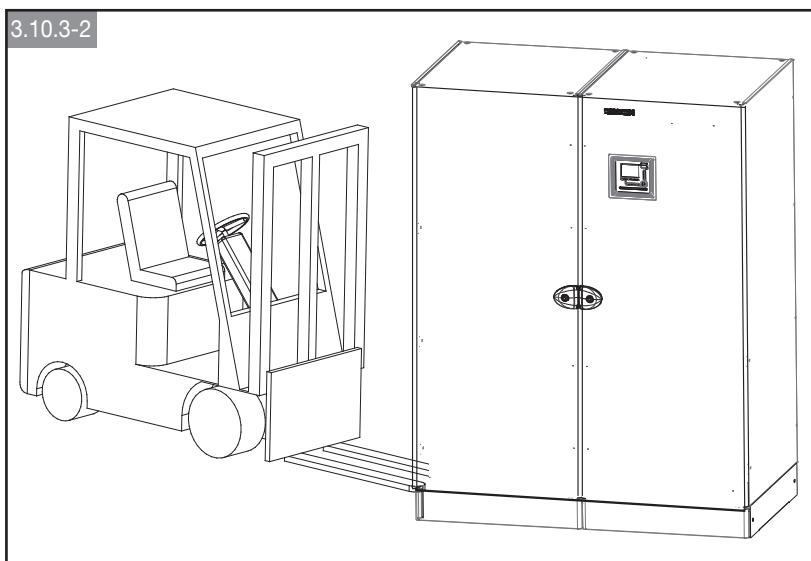
Remove the grilles on the front and rear of the cabinet and introduce the fork under the unit.

#### HANDLING FROM THE FRONT OR THE REAR



#### LATERAL HANDLING

Lateral handling is also possible, provided that the bottom side panels are removed.



Note : the fork should be at least 2 cm longer than the width of the cabinet



Given the cabinets are heavy, handling using a pallet truck on slopes or ramps –even only slightly inclined, is hazardous and can cause severe accidents.

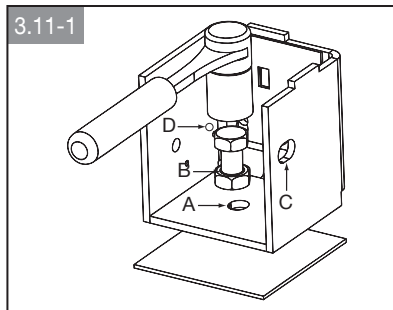


Take all required precautions and use adapted means and tools.

### 3.11. FIXING TO THE FLOOR (A RAISED FLOOR OR DIRECTLY TO THE FLOOR)

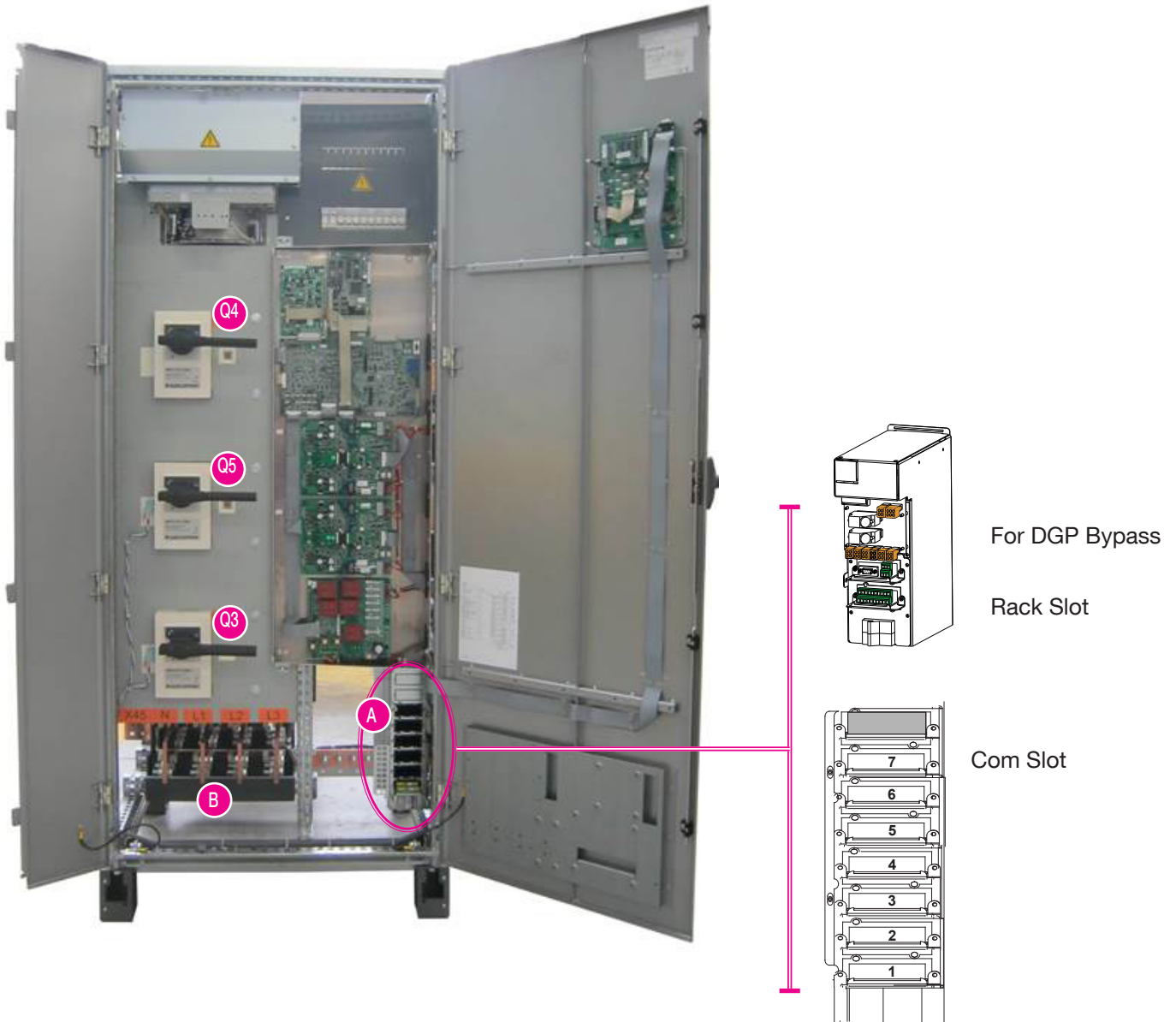
Each foot of the cabinet needs to be linked up to the metallic mesh network (if the cabinet is on a raised floor) or to have direct earth bonding (if the cabinet is directly positioned on the floor) by using short links with a cross-section  $\geq 35 \text{ mm}^2$ . Use braidings to connect all the metallic feet of the raised floor and guarantee equipotential cabling.

Each foot has a floor fixing hole (labelled A :  $\varnothing 13$ ) and welded nut for level adjusting (labelled B : screw THM 12 not supplied).



### 3.12. IDENTIFYING SWITCHING AND CONNECTION ORGANS

#### Bypass 400 to 1200 kVA



#### Legend.

A Slot for optional communication cards.

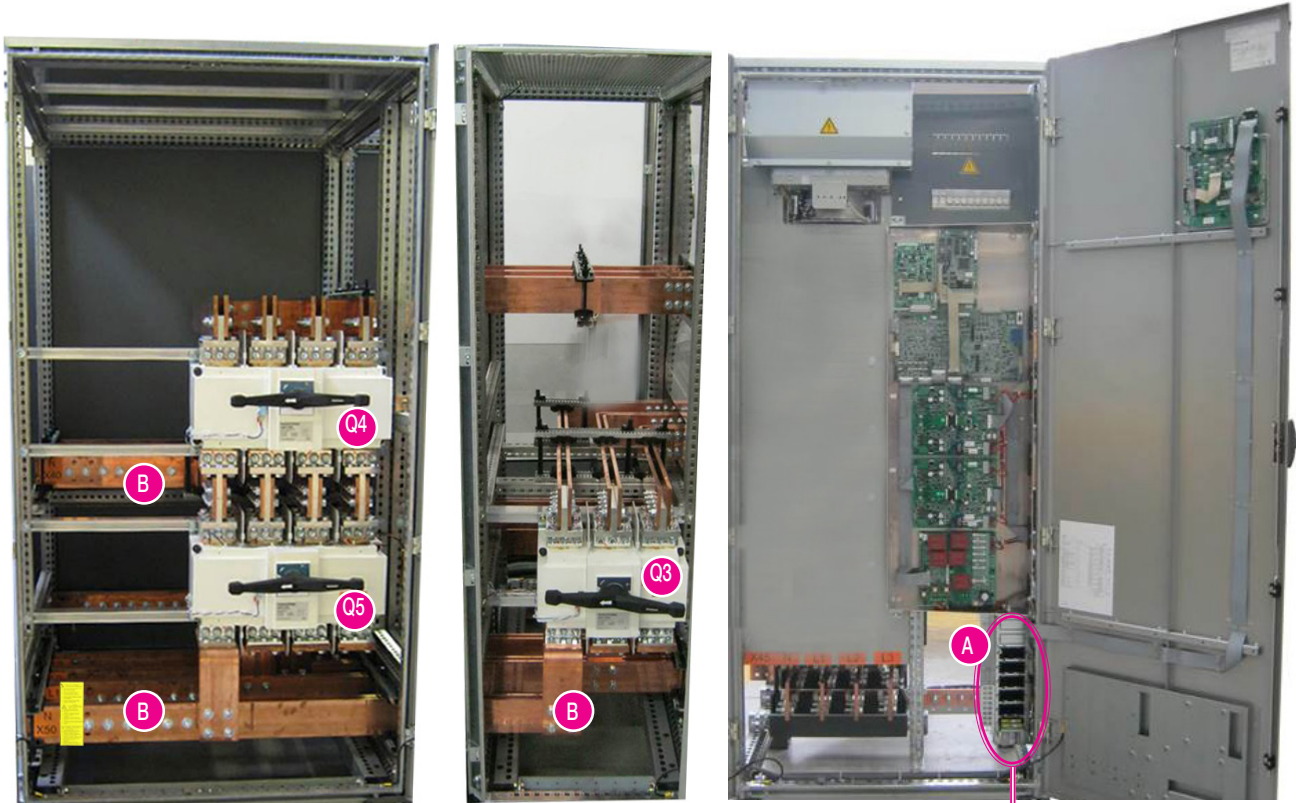
B Power connections.

Q3 Modules Input switch.

Q4 Auxiliary mains Input switch (AUX MAINS).

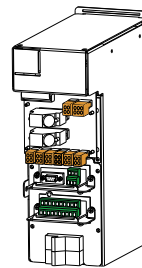
Q5 Output switch (LOAD).

**Bypass 1500 to 2000 kVA**

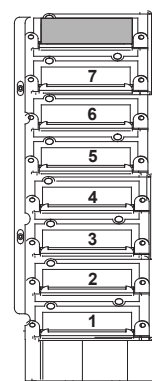


Rack Slot

Com Slot



For DGP Bypass

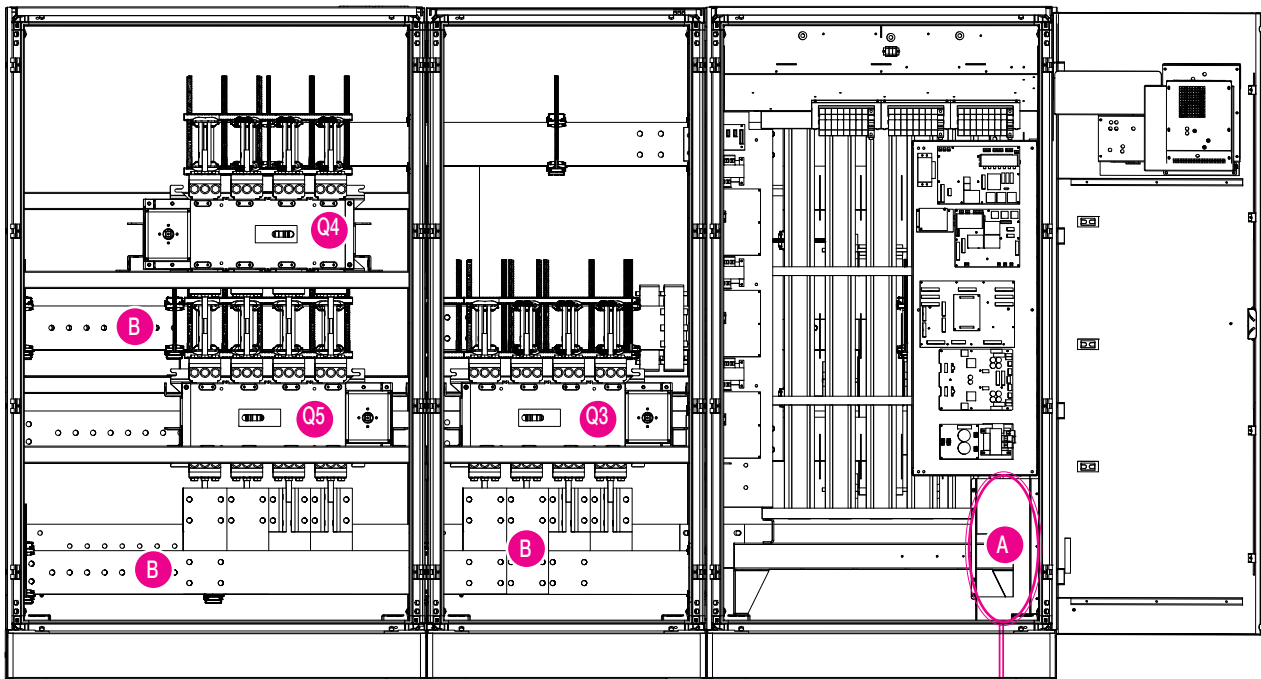


For DMX Bypass

**Legend.**

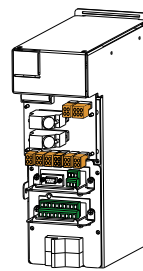
- A Slot for optional communication cards.
- B Power connections.
- Q3 Modules Input switch.
- Q4 Auxiliary mains Input switch (AUX MAINS).
- Q5 Output switch (LOAD).

## Bypass 2400 kVA

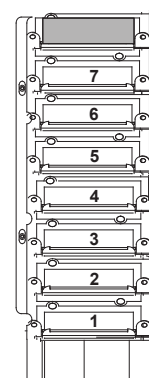


Rack Slot

Com Slot



For DGP Bypass



For DMX Bypass

### Legend.

- A Slot for optional communication cards.
- B Power connections.
- Q3 Modules Input switch.
- Q4 Auxiliary mains Input switch (AUX MAINS).
- Q5 Output switch (LOAD).

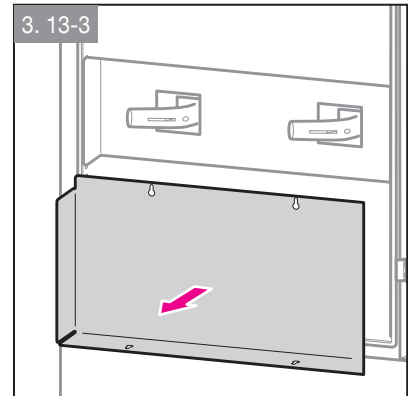
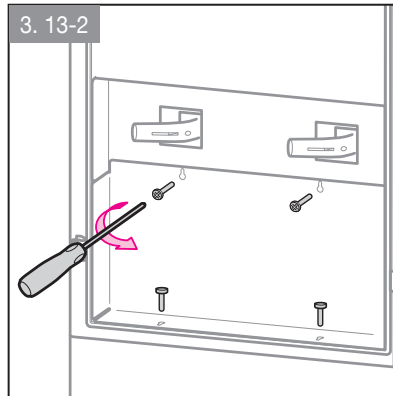
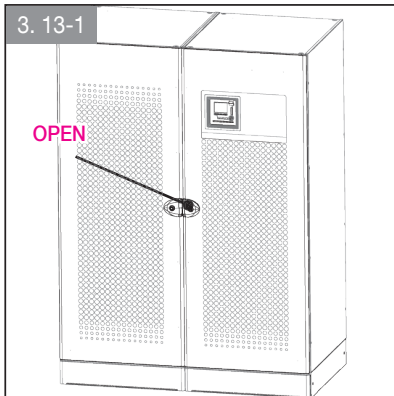
## Bypass 2500 - 3200\*

\*please refer to the file attached to the adapted project

### 3.13. INSTALLATION PROCEDURES AND INSTRUCTIONS



Before carrying out work on the terminal board or on UPS internal parts, ensure that Bypass Cabinet is switched off, remove the power supply, open the external battery cabinet disconnectors, isolate the system and wait 5 minutes.





### 3.14. BACKFEED PROTECTION

#### STANDARD:

The backfeed protection is compliant with standard IEC 62040-1.

#### PURPOSE:

The backfeed protection is for ensuring personnel safety against any risks of accidental energy return to the input circuit. The backfeed protection imposes the automatic opening of a switching device in case of a malfunctioning of the static switch.

Principle:

The backfeed protection consists of an electronic detection PCB internal to Bypass Cabinet and an external electro-mechanical device for isolation from the power circuit. Optionally, the backfeed protection device may be built into the system. For further details about the size of the protective device, please see § 3. 6.

#### LABEL:

A safety label bearing the following advice is available in the equipment:

«ISOLATE Bypass Cabinet BEFORE WORKING ON THIS CIRCUIT»

the operator shall stick the label on the electromechanical device for isolation from the power circuit.

#### **For DGP Bypass Cabinet:**

##### **XB2 terminals 1-2:**

connection of the trip coil 220V-240V of the power isolating device.

##### **XB7 terminals 1-2:**

connection of the auxiliary contact indicating the status of the power isolating device.

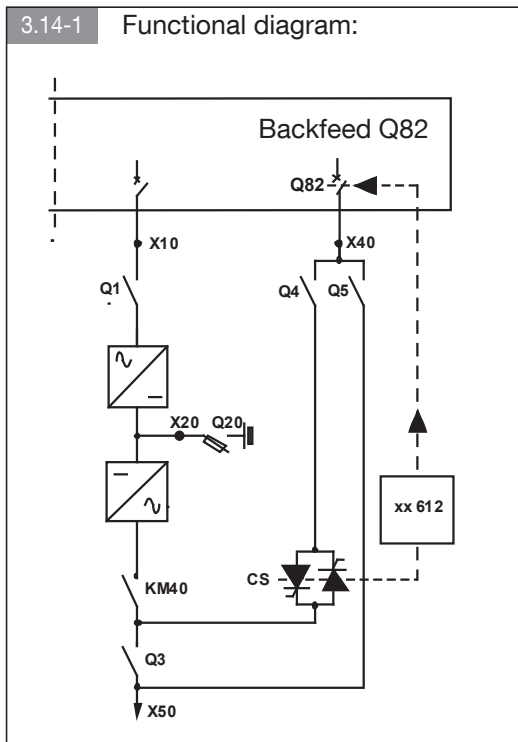
#### **For DMX Bypass Cabinet:**

##### **XB6 terminals 1-2:**

connection of the trip coil 220V-240V of the power isolating device.

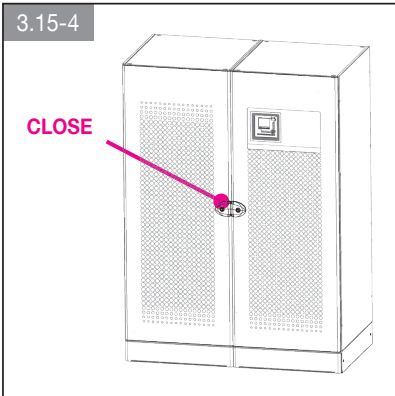
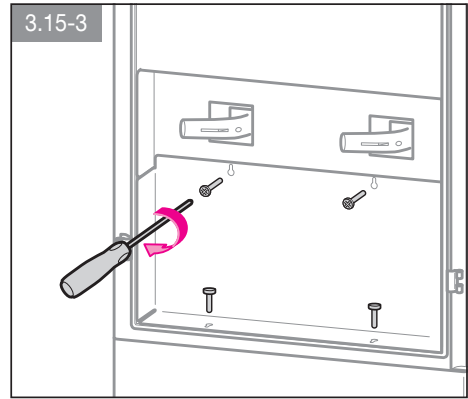
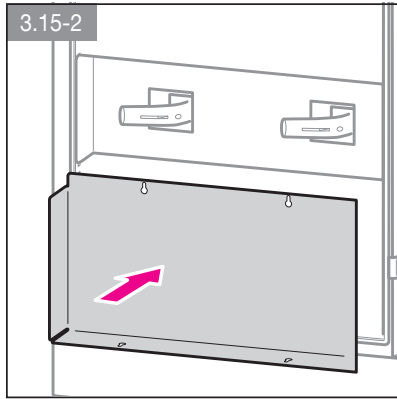
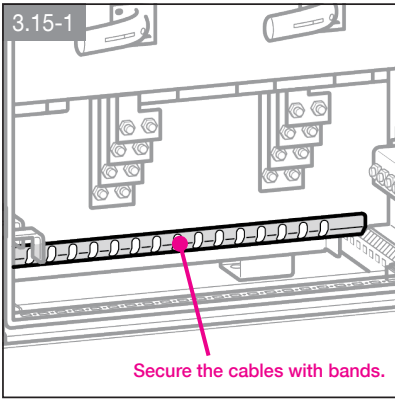
##### **XB5 terminals 1-2:**

connection of the auxiliary contact indicating the status of the power isolating device.



If contact 1-2 on XB7 ou XB5 is open, you will have an alarm, according to the Standard

### 3.15. COMPLETION OF THE INSTALLATION



Do not forget to put back protective screens.

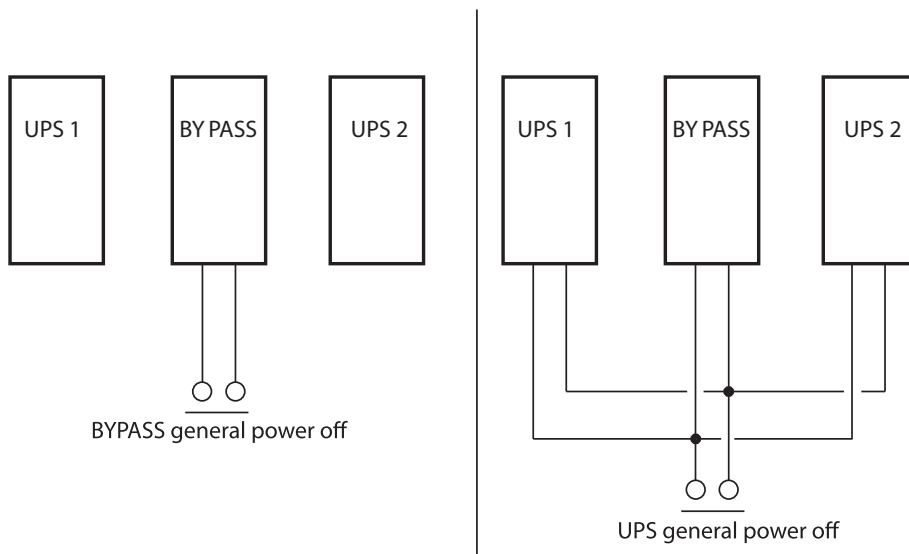
### 3.16. UPS GENERAL POWER OFF CONNECTION

UPS general power off system can be installed on the Com Slot (DMX) or Rack slot (DGP) (see § 3.18 and 3.19). The UPS general power off causes:

- the load to be shutdown
- the rectifier, the inverter and the automatic bypass are shutdown but the **battery remains connected**.

In such a case, emergency switching conditions are not complied with. If required, an option provides for a trip coil, directly controlled by the UPS general power off which can be used to trip the battery protection device.

Connect a normally open, dry-switch contact to terminals XB8 (and/or XB16) 1 and 2 on QB612 card for DGP and on IN1+ / IN1- of Slot 1 for DMX of **each cabinet** (module and bypass, could be bridged).



### 3.17. CONNECTION

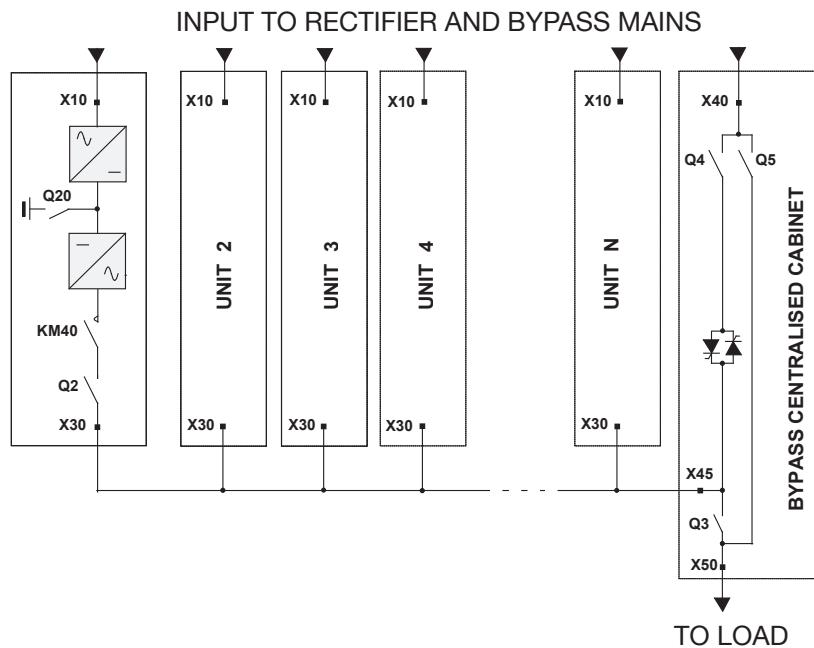
PkVA	Name	Designation	Copper termination	∅ hole	Screw	Max cross section	Coupling torque**
400 to 800	X45/L	Unit input	100 x 5 mm	3 x 13	M12	2x 3 x 240 mm <sup>2</sup>	70 Nm
	X45/N		185 x 5 mm	5 x 13	M12	5 x 240 mm <sup>2</sup>	70 Nm
	X40	Mains input	185 x 5 mm	4 x 13	M12	4 x 240 mm <sup>2</sup>	70 Nm
	X50	Load output	185 x 5 mm	4 x 13	M12	4 x 240 mm <sup>2</sup>	70 Nm
	PE	Protective conductor	50 x 5 mm	6 x 13	M12	6 x 150 mm <sup>2</sup>	70 Nm
900 to 1200	X45/L	Unit input	100 x 10 mm	3 x 13	M12	2x 3 x 240 mm <sup>2</sup>	70 Nm
	X45/N		100 x 10 mm	10 x 13	M12	2x 10 x 240 mm <sup>2</sup>	70 Nm
	X40	Mains input	100 x 10 mm	4 x 15	M14	2x 4 x 240 mm <sup>2</sup>	110 Nm
	X50	Load output	100 x 10 mm*	4 x 15	M14	2x 4 x 240 mm <sup>2</sup>	110 Nm
	PE	Protective conductor	50 x 5 mm*	6 x 13	M12	6 x 240 mm <sup>2</sup>	70 Nm
1600 to 2000	X45	Unit input	100 x 10 mm	3 x 13	M12	2x 10 x 240 mm <sup>2</sup>	70 Nm
	X40	Mains input	100 x 10 mm	14 x 13	M12	2x 7 x 240 mm <sup>2</sup>	70 Nm
	X50	Load output	100 x 10 mm*	14 x 13	M12	2x 7 x 240 mm <sup>2</sup>	70 Nm
	PE	Protective conductor	100 x 10 mm*	6 x 13	M12	2x 21 x 240 mm <sup>2</sup>	70 Nm
2400 to 2500	X45	Unit input	2x 125 x 10	10 x 15	M14		
	X40	Mains input	2x 125 x 10	8 x 15	M14		
	X50	Load output	2x 125 x 10	8 x 15	M14		
	PE	Protective conductor	125 x 10	12 x 13	M12		70 Nm
3200	please refer to the file attached to the adapted project						

\*Copper extension terminals (100x10, 7 holes x13) are to be moved from X40 to X50 if cable input is from the top.

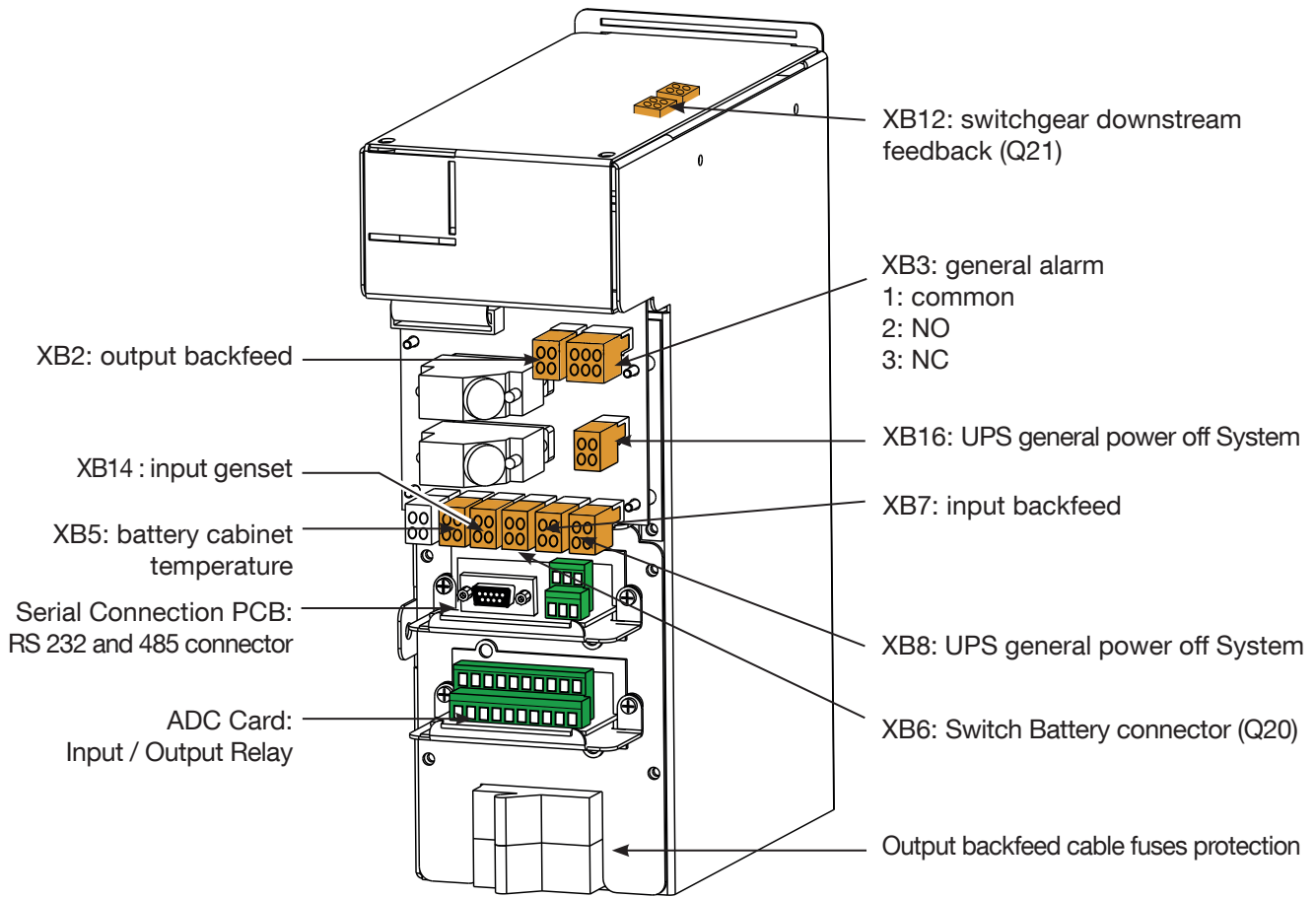
\*\* In case of use of stainless steel screws (quality class 70, screws A2 and nut A4) the tightening torques are: M12 = 50 and M14 = 82



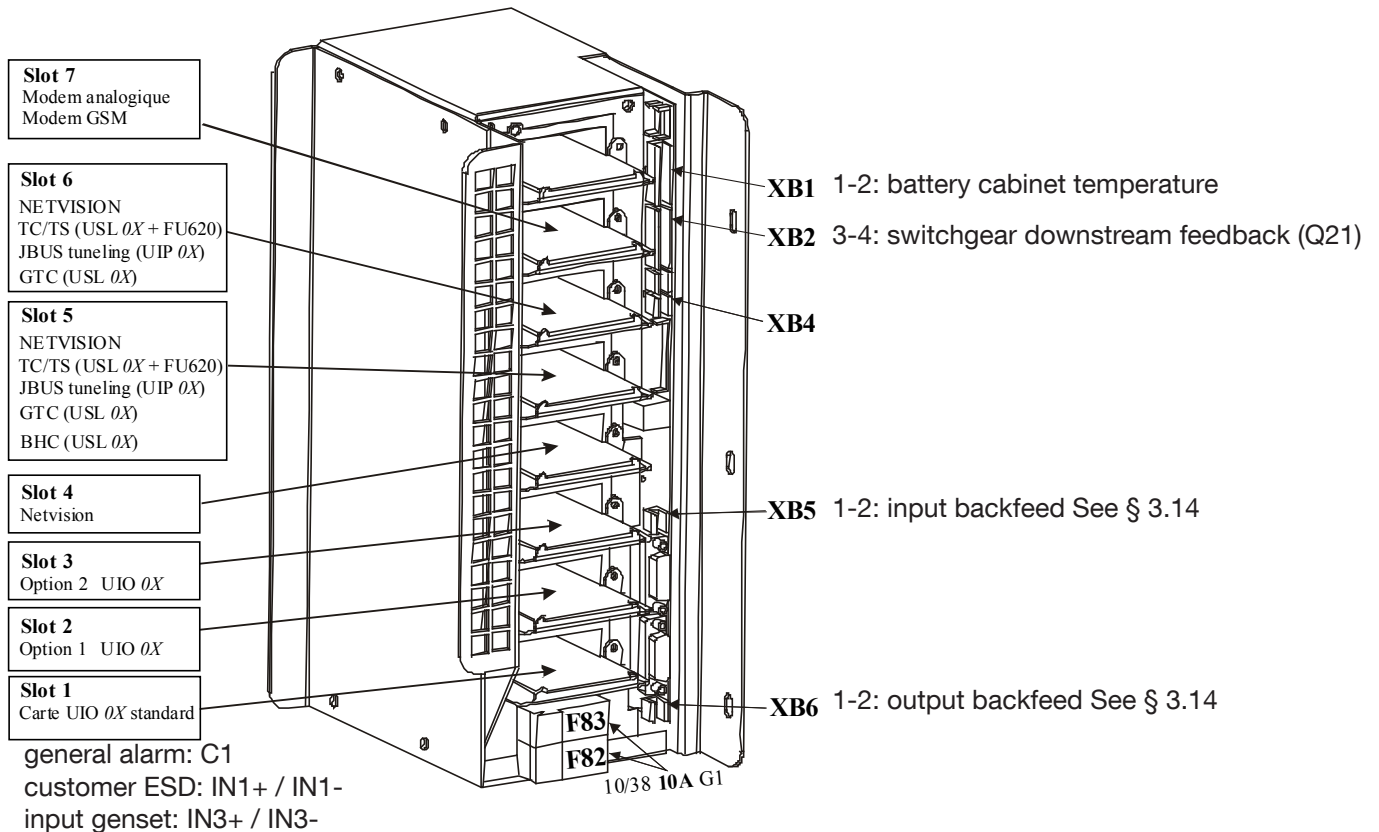
Unused screws shall be either removed or tightened, to prevent short circuits in case of drop



### 3.18. RACK SLOT FOR DGP BYPASS



### 3.19. COM SLOT AND DU612 CARD FOR DMX BYPASS



## 4. PREVENTIVE MAINTENANCE



All operations on the equipment must be carried out solely by SOCOMEC personnel or by authorised service personnel.

Maintenance requires accurate functionality checks of the various electronic and mechanical parts and, if necessary, the replacement of parts subject to wear and tear (batteries, fans and condensers). It is recommended to carry out periodic specialised maintenance (annually), in order to keep the equipment at the maximum level of efficiency and to avoid the installation being out of service with possible damage/risks. Moreover, attention should be paid to any requests for preventive maintenance that the equipment may automatically display with alarm/warning message.

### 4.1. FANS

The life of the fans used to cool the power parts is dependent on the using and environmental conditions (temperature, dust).

Preventive replacement by an authorised technician is recommended within 4 years (in normal operating conditions).



When needed, fans must be replaced as per specifications by SOCOMEC.

# 5. COMMUNICATION

## 5.1. MULTILEVEL COMMUNICATION

Bypass Cabinet can manage various serial, contact and Ethernet communication channels at the same time. The 2 communication slots available allow the use of signalling accessories and cards.

Each communication channel is independent; simultaneous connections can thus be made to have various levels of remote signalling and monitoring. The table below shows the possible connections between Bypass Cabinet communication channels and the external devices.


	<b>DGP Communication levels</b>		Optional		
	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5
ADC card	•	•	•	•	•
Modbus RTU*		COM2	COM3	COM2	
NetVision		•			
Modbus TCP		•			
BACNET		•			

\* It is possible to use one isolated serial PCB only.

	<b>DMX Communication levels</b>		Optional			
	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5	SLOT 6
ADC card	•	•	•	•		
Modbus RTU*		COM2	COM3	COM2	•	•
NetVision		•			•	•
Modbus TCP		•			•	•
BACNET					•	•

\* It is possible to use one isolated serial PCB only.

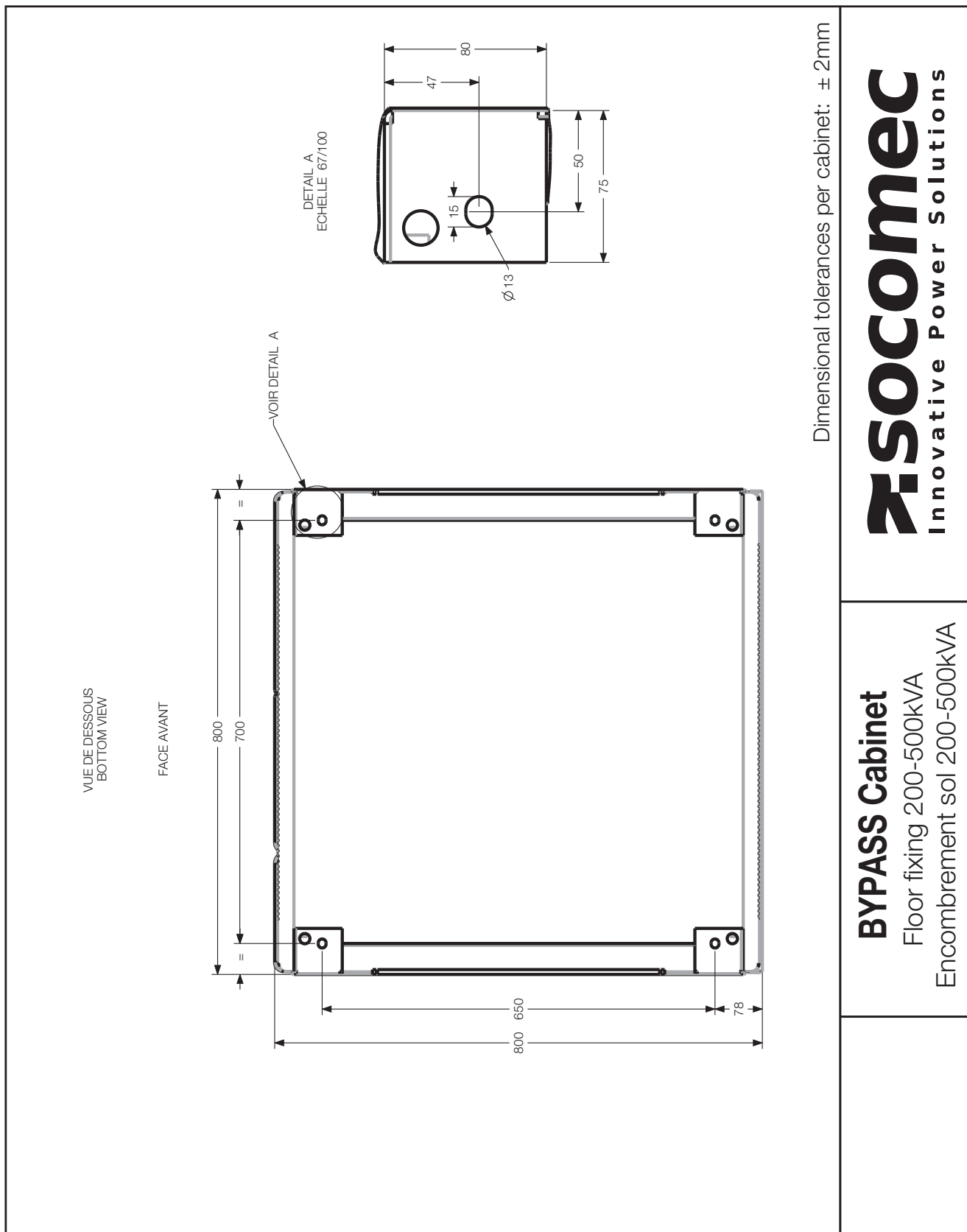
## 6. TECHNICAL SPECIFICATIONS

Bypass Cabinet		(kVA)	400	500	800	1200	2000	2400	2500	3200
<b>Electrical specifications - Input</b>										
Mains voltage	3P+N Un= 380VAC / 400VAC / 415VAC									
Voltage tolerance	±10%									
Input frequency	50/60Hz									
Maximum phase error	Bypass DGP	10°								
	Bypass DMX	7°								
<b>Electrical specifications - Output</b>										
Output voltage	3P+N 380 / 400 / 415 VAC									
Frequency	50/60 Hz									
Nominal power	kVA	400	500	800	1200	2000	2400	2500	3200	
Rated short-time withstand current I <sub>cw</sub>	kA	15	15	24	36	50	50	50	50	
Maximum overload capacity admitted	60 min	110%								
	10 min	125%								
	1 min	150%								
<b>Environment</b>										
Operating temperature (permanent)	10 to 40 °C (25 °C recommended)									
Storage temperature	-20 to 70 °C									
Relative humidity (condensation-free)	up to 95%									
Max. altitude	1000 m									
Acoustic noise	dB(A)	65	65	65	72	72	81			
Air flow	m <sup>3</sup> /h	1050	1050	900	2000	2200	2200	3000	3000	
Dissipated power max at P <sub>n</sub> nominal condition	W	2700	2700	3640	5260	11600	16700	17900	22100	
	BTU/h	9213	9213	12420	17948	39581	56947	61039	75408	
<b>Standards</b>										
Safety	IEC 62040-1									
EMC	IEC 62040-2									
Product certification										
Protection level	IP20									

These performances are given for information at rated load (resistive)

# 7. PLANS

## 7.1. PLAN 1: FLOOR FIXING 400 - 500 kVA

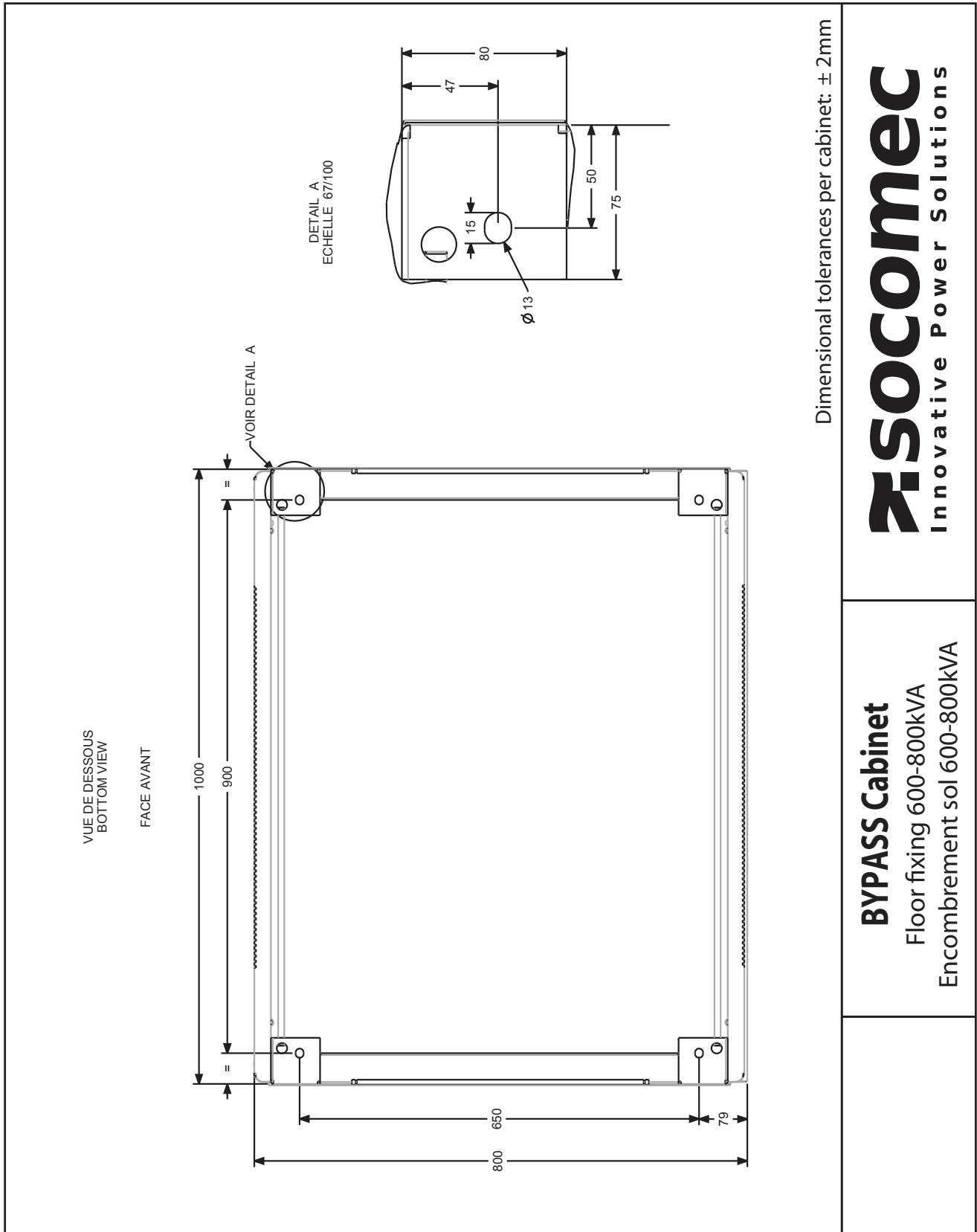


**BYPASS Cabinet**  
 Floor fixing 200-500kVA  
 Encombrement sol 200-500kVA

**SOCOMEc**  
 Innovative Power Solutions



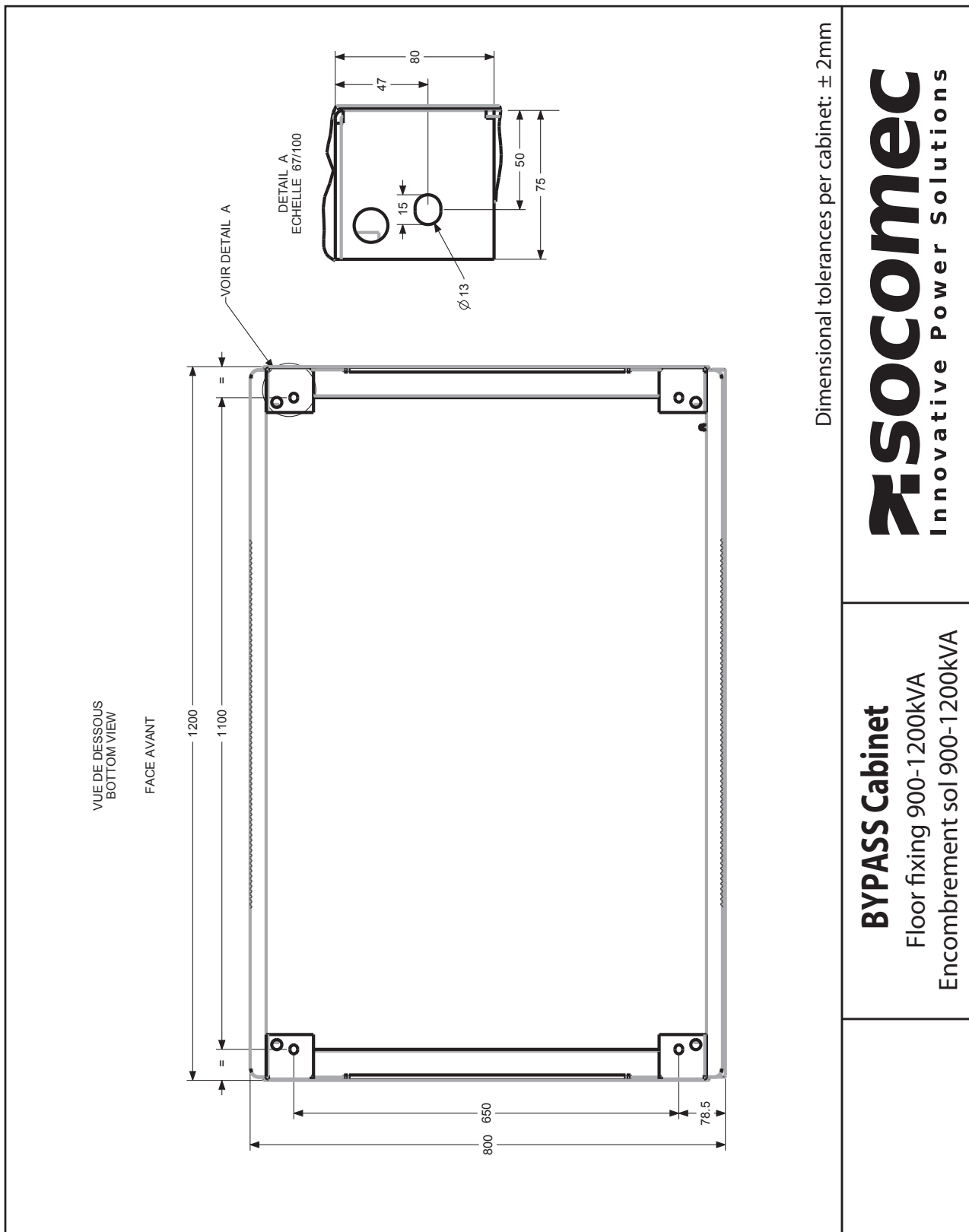
## 7.2. PLAN 2: FLOOR FIXING 600 - 800 kVA



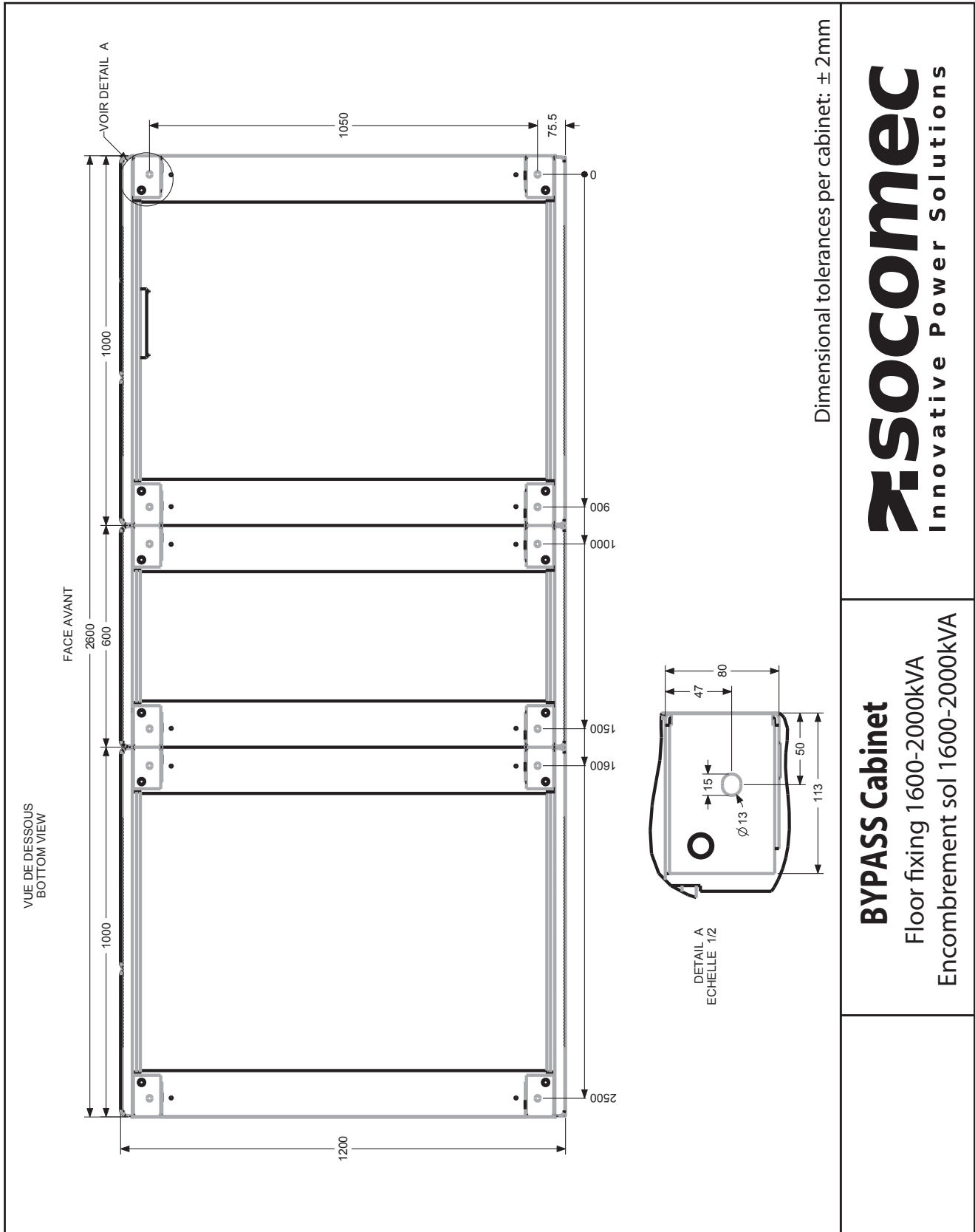
**BYPASS Cabinet**  
 Floor fixing 600-800kVA  
 Encombrement sol 600-800kVA

**SOCOMEc**  
 Innovative Power Solutions

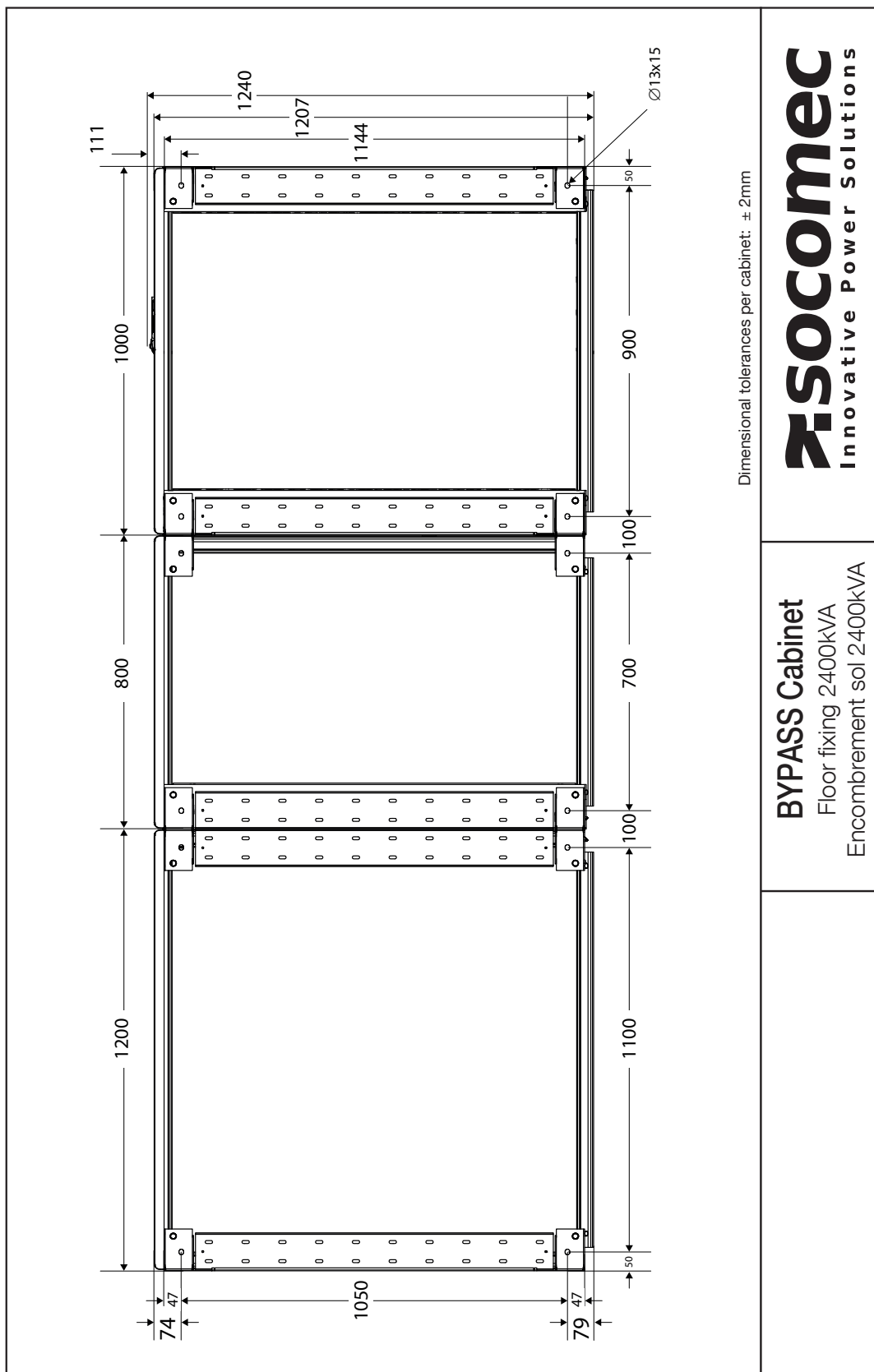
### 7.3. PLAN 3: FLOOR FIXING 900 - 1200 kVA



## 7.4. PLAN 4: FLOOR FIXING 1600 - 2000 kVA



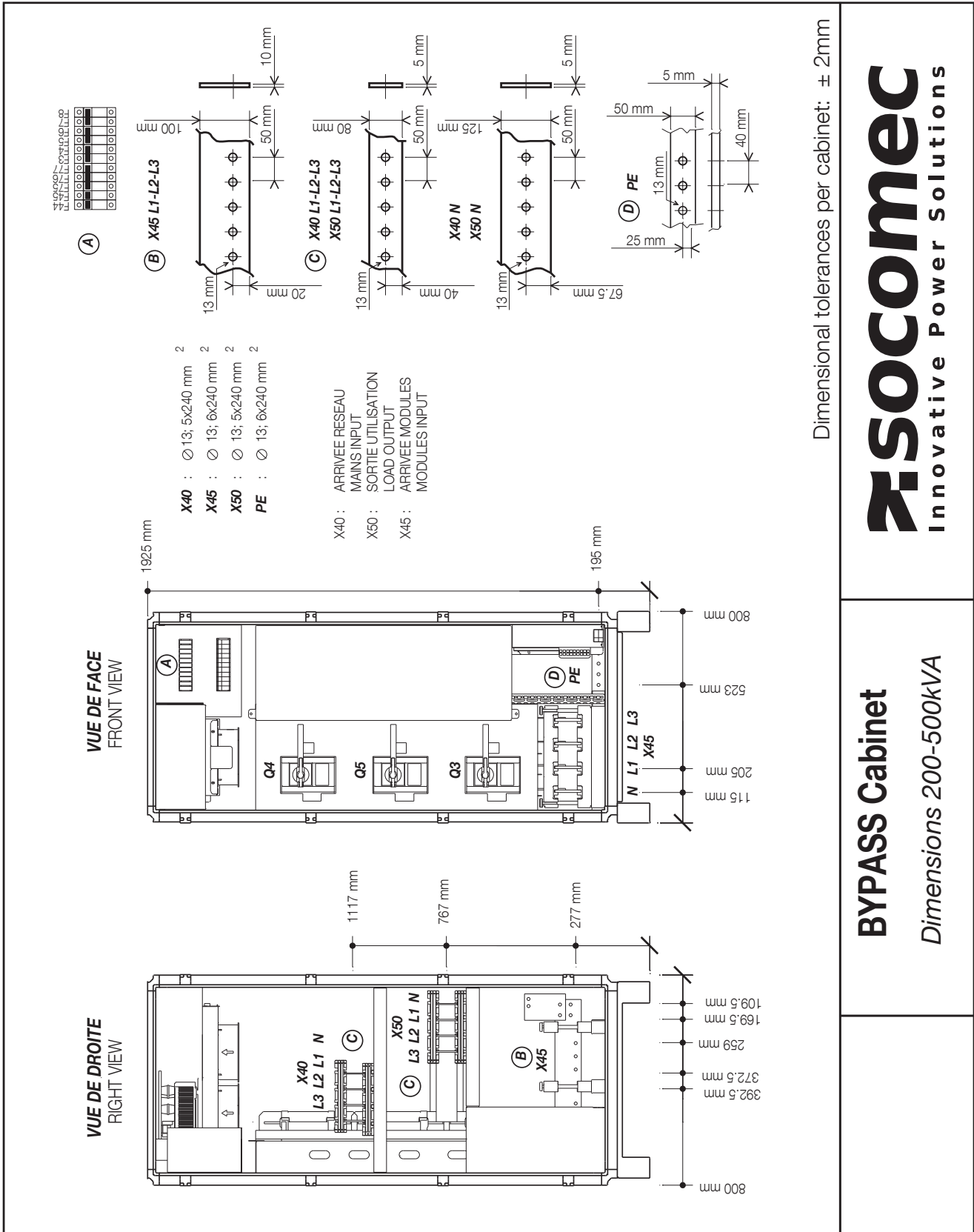
## 7.5. PLAN 5: FLOOR FIXING 2400 kVA



## 7.6. PLAN 6: FLOOR FIXING 2500 - 3200 kVA\*

\*please refer to the file attached to the adapted project

# 7.7. PLAN 7: DIMENSIONS 400 - 500 kVA

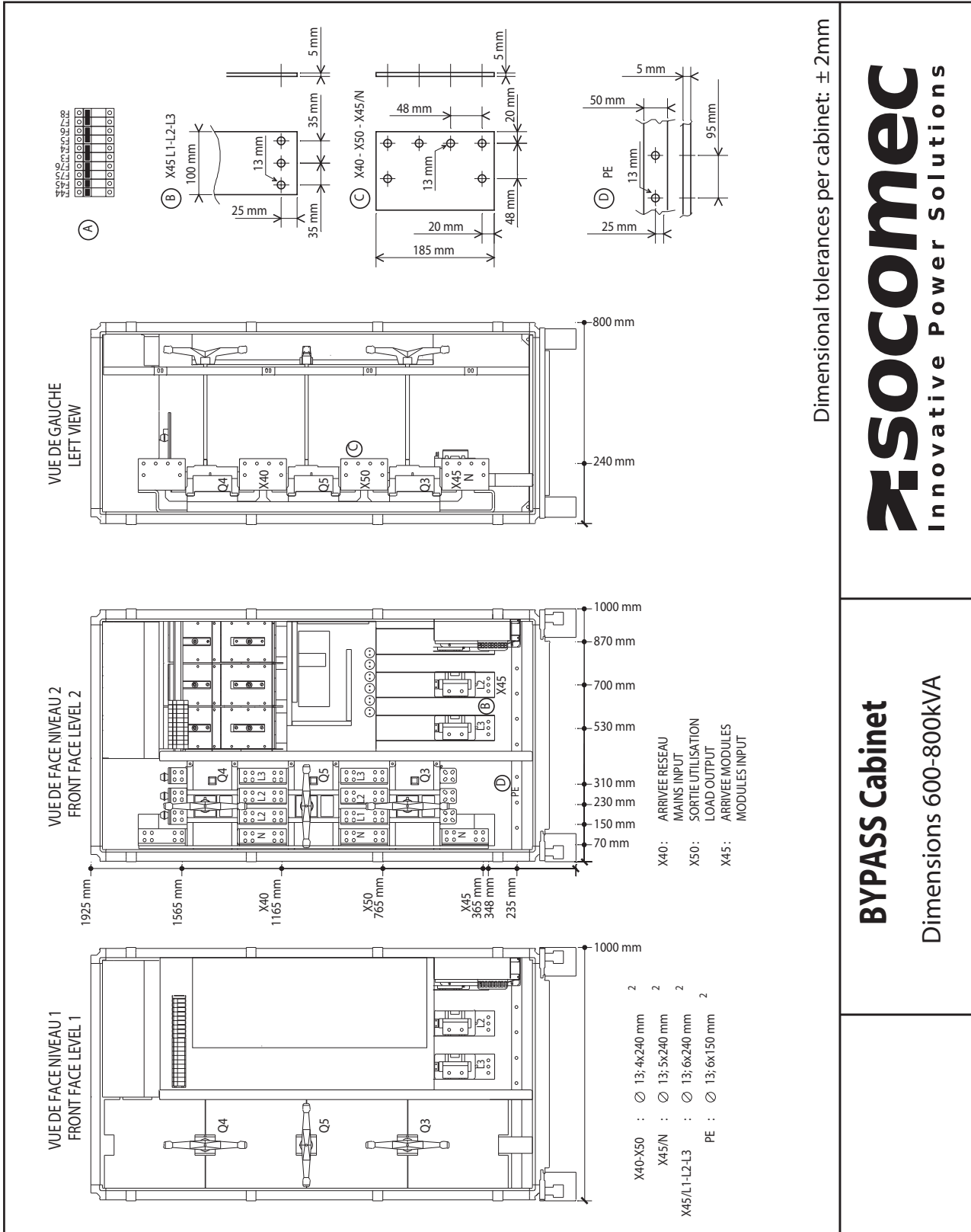


## BYPASS Cabinet

Dimensions 200-500kVA

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# 7.8. PLAN 8: DIMENSIONS 600 - 800 kVA

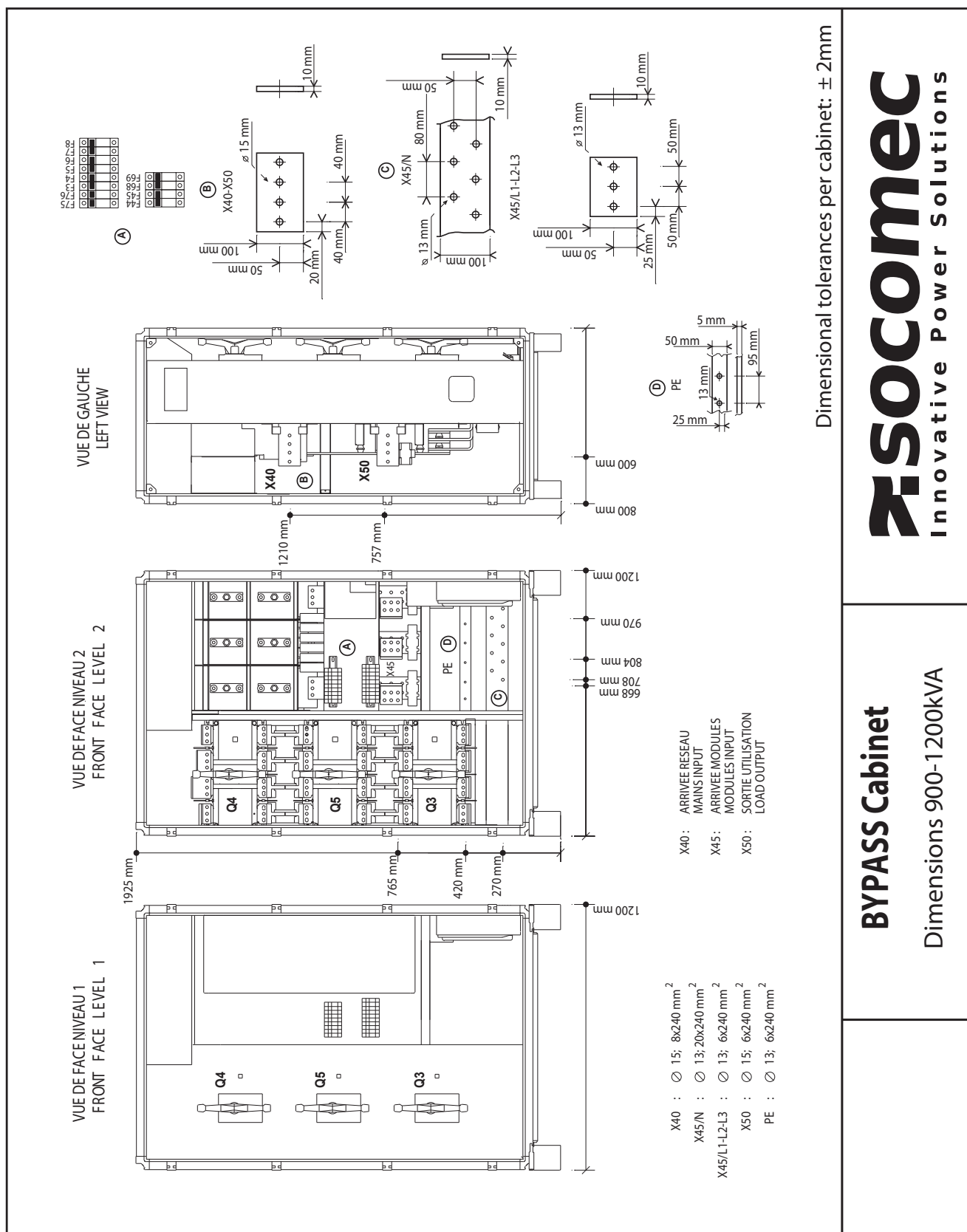


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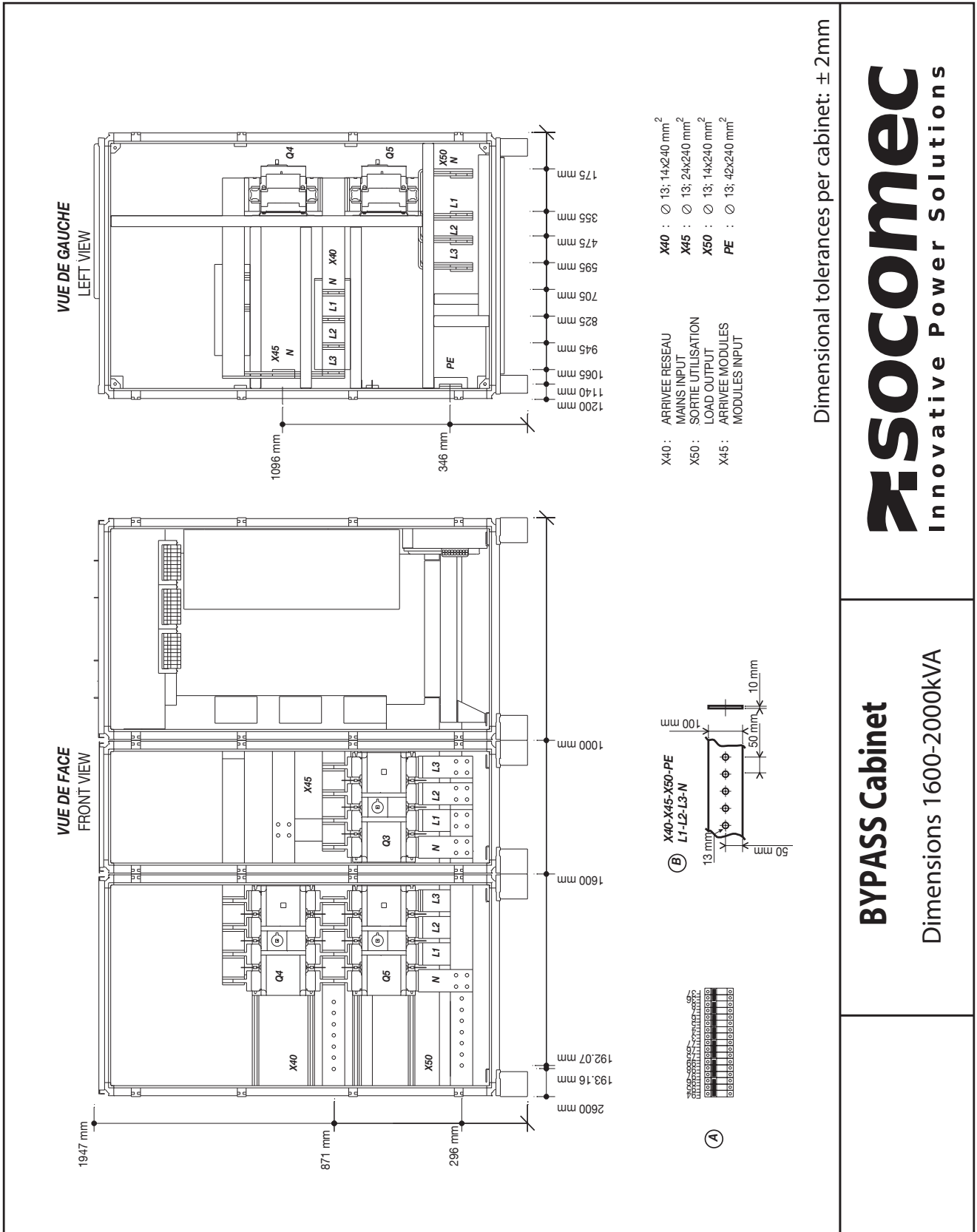
**BYPASS Cabinet**

Dimensions 600-800kVA

## 7.9. PLAN 9: DIMENSIONS 900 - 1200 kVA

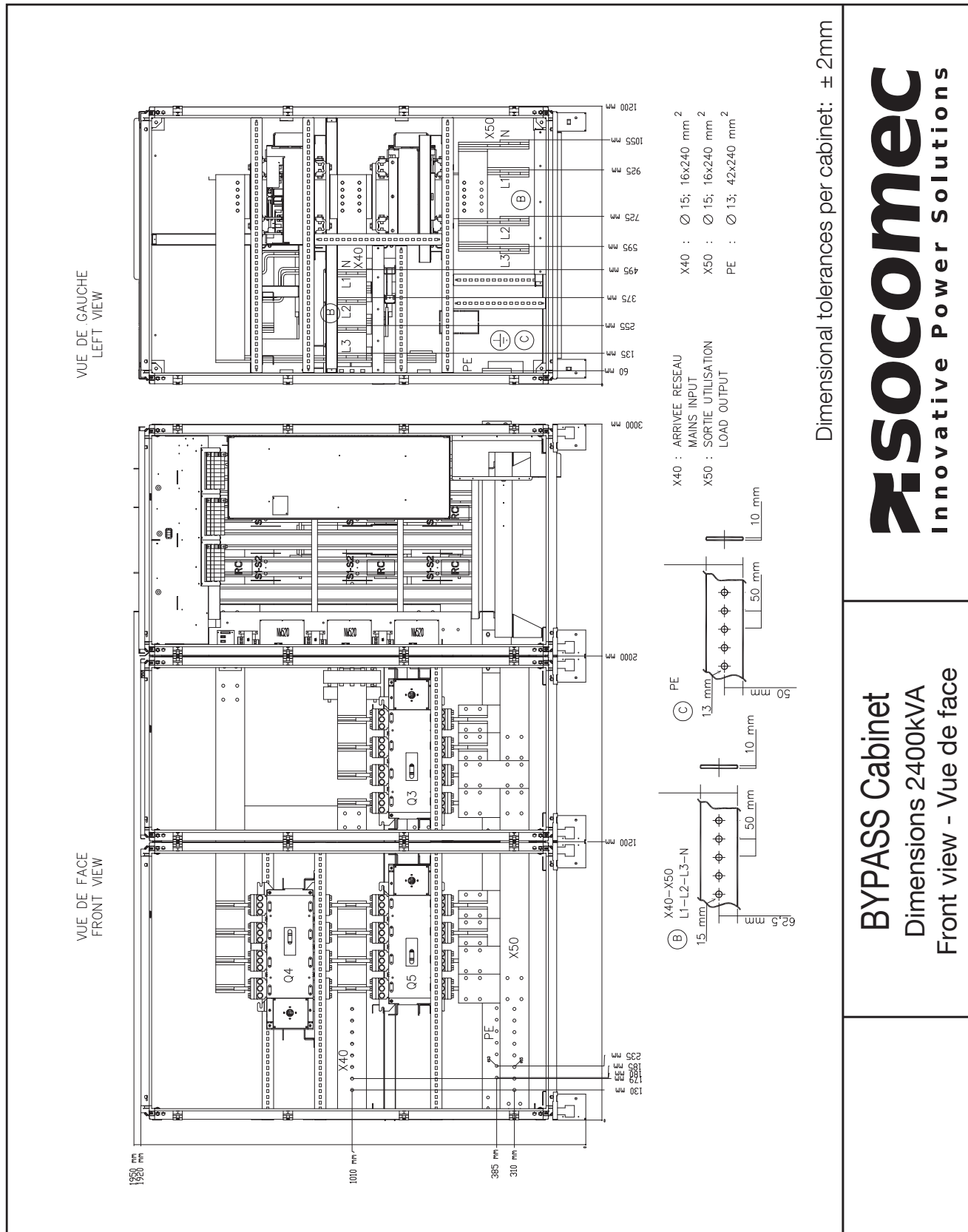


# 7.10. PLAN 10: DIMENSIONS 1600 - 2000 kVA





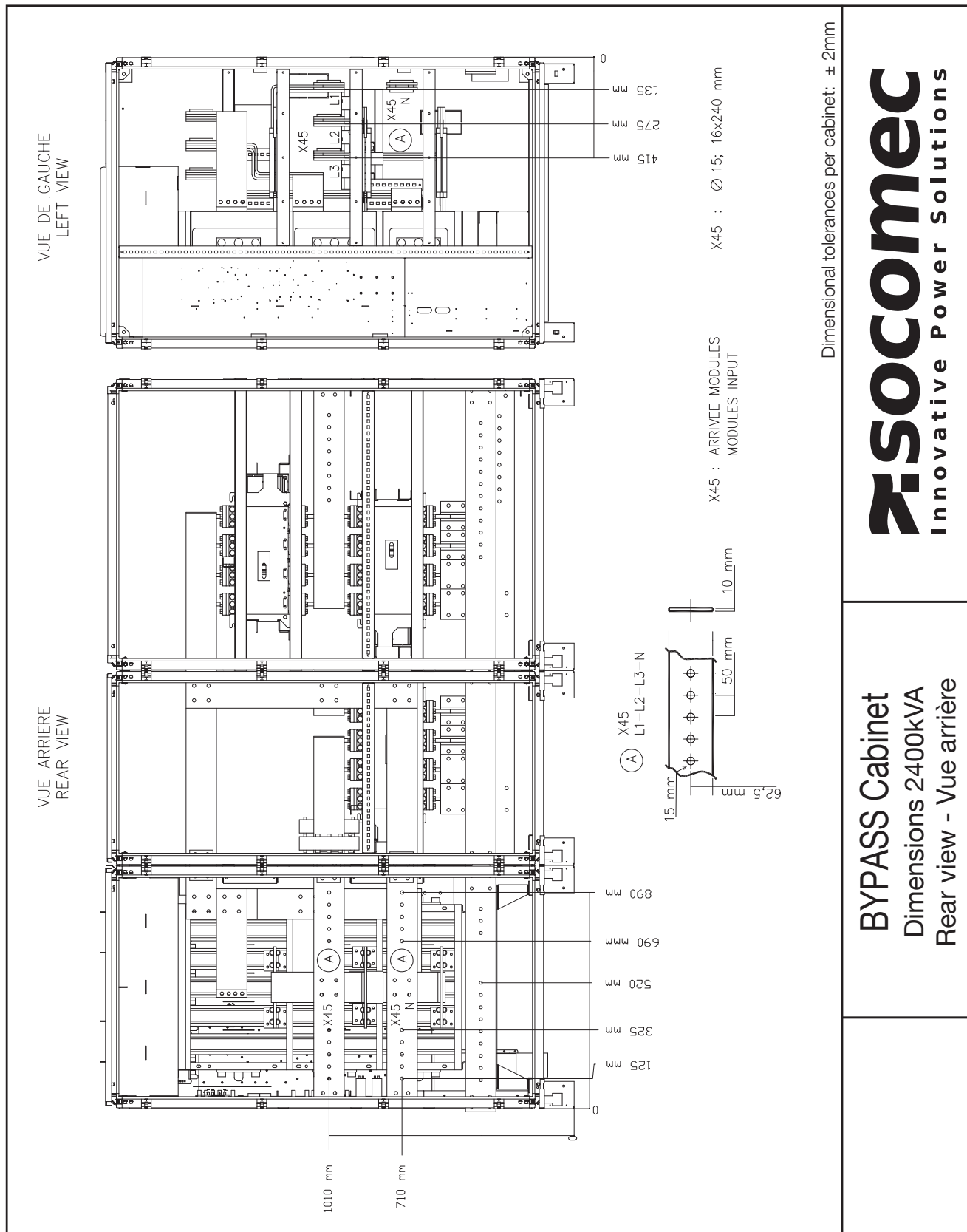
# 7.11. PLAN 11: DIMENSIONS 2400 kVA - FRONT VIEW



**BYPASS Cabinet**  
 Dimensions 2400kVA  
 Front view - Vue de face

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## 7.12. PLAN 12: DIMENSIONS 2400 kVA - REAR VIEW



## 7.13. PLAN 13: DIMENSIONS 2500 - 3200kVA\*

\*please refer to the file attached to the adapted project



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